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THE SPELLING ACHIEVEMENT AND REFLECTIONS OF STUDENTS OVER A FIVE YEAR PERIOD IN THE ELEMENTARY AND JUNIOR HIGH SCHOOL

by

(C) WALLY LINNEMAN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

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R K Jatson

Supervisor

Ernest T. Hodgson

Date November 3rd, 1982

ABSTRACT

The purpose of this study was to look at the spelling achievement results of a group of students over a period of five years to see whether there are identifiable trends in the acquisition of a spelling vocabulary.

In addition to this, a smaller group of students was interviewed to obtain their perceptions of spelling programs and the instruction which they received over the corresponding five year period.

The students included in the study were those whose spelling achievement scores were on record at the elementary school which they attended. Only those students who were available for the post-test were included in the study. The smaller group of students who participated in the structured interview was selected at random from the larger sample.

The mean of the achievement scores in spelling was recorded for each of the groups at each grade level. A post-test was administered to all students and the mean score was calculated for each grade level.

The recorded spelling achievement scores and the scores obtained from the post test provided the data for making several comparisons.

The achievement scores in spelling were compared from one grade level to another. The scores indicated that all groups increased in spelling achievement from one year to the

next. The greatest gain occurred at the Grade 3 and Grade 2 levels. The least amount of gain occurred at the junior highschool level.

The spelling achievement scores of the girls were compared to the scores of the boys at each grade level. It was found that there was almost no difference between the scores of the girls and the scores of the boys in the elementary grades. The difference in the achievement scores increased in the junior highschool grades in favour of the girls.

The spelling achievement scores of the "good" spellers were compared to the scores of the "poor" spellers. Both groups made gains from one year to another. The difference in their scores became greater in the junior highschool grades.

There were almost the same number of boys and girls who were "good" spellers but twice as many boys than girls who were "poor" spellers.

The structured interviews provided some interesting insights as to the perceptions which students have about spelling programs and instruction in the elementary and junior highschool grades.

The findings from this study give some indications as to how spelling programs and instruction might be re-structured to provide for the "good", "average" or "poor" spellers within each classroom at the different grade levels.

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Chapter I

THE PROBLEM

I Introduction

> Whenever we wish to set down our thoughts and feelings in writing, we engage in the act of spelling (Hanna, Hodges, Hanna, 1971, p. 3).

Helping students to become proficient in spelling words correctly in their written communication is still one of the aims of basic education. Whenever society raises questions as to the efficiency of public schooling, the level of competency in written communication is most often a focal point of scrutiny and correct spelling is still deemed to be an important ingredient in written expression. There are some educators who seem to maintain that correct spelling is not important as long as the ideas are original, however, at some point, most educators would agree that incorrect spelling detracts greatly from original writing and diminishes its quality and credibility. Hanna (1971) summarizes:

> The ability to acquire and use the skills basic to written communication is a requisite in modern society, and indeed it is to some extent basic to all forms of human communication. Orthographies (writing systems) permit man to record his thoughts and feelings for use at a later time or to communicate with others who may be beyond the range of his voice. In short, written communication extends the functions of human speech over space and over time (p. 3).

A recent research brief for teachers, prepared at the University of Lancaster on The Teaching of Spelling (1981) reflects the public concern for spelling achievement when it states:

> A casual regard for spelling ability is certainly not shared by the community at large, particularly the prospective employer, for whom it sometimes appears to symbolise the applicant's whole educational standing (p. 2).

The written word is still a major vehicle for sharing knowledge, feelings and ideas, so there is good reason for keeping its parts in good repair. An additional reason for correct spelling is also cited in the above mentioned report:

> A separate reason for giving attention to spelling is that the creative qualities of free writing depend on it. Unless a child's spelling is automatic, predictable and infallible, he will lose confidence when writing and express himself less competently and with diminished impact (p. 2).

There are many factors which contribute to the success or failure of students in spelling. One of these factors concerns the method of teaching, and there has been continued debate over the years as to which method achieves the best results. In addition to this, each student possesses a unique combination of strengths and needs at various stages of development, which greatly affect the rate of learning to spell and acquiring a spelling vocabulary. Consequently, in every classroom there are those students who seem to be able to spell efficiently without much effort and other students who find it extremely difficult.

In spite of the fact that a great deal of research has

been conducted in the area of spelling throughout this century, the controversies continue and many questions remain unresolved. This study proposes an investigation of several questions pertaining to students' progress in spelling over a period of time and across grade levels, from elementary to junior high school.

II Purpose of the Study

The purpose of this study is to look at the spelling results of a group of students over a period of five years to see whether there are identifiable trends in the acquisition of a spelling vocabulary.

In addition, a group of students from the larger sample will be interviewed to ascertain their perceptions of spelling programs and the instruction which they received over the corresponding five year period. Specifically, this study will consider the following questions:

1. How do scores for the same students on the Morrison-McCall Spelling Scale vary over a period of five years which extends through the elementary grades and into the junior high school setting?
2. Are there discernible stages over the five year period at which there is more, or less, growth in spelling achievement?
3. Are there discernible differences in progress between male and female spellers over the five year period?

4. Are there discernible differences in progress between "good" and "poor" spellers over the five year period?
5. How do students perceive the spelling programs and instruction which they have received over the five year period?

III Definition of Terms Used

For the purpose of this study the following definitions are assigned to these terms:

"Good" speller: A good speller will be any student who ranks within the top 25 percent of his/her particular grade group. These students will be referred to as being in the "first quartile".

"Poor" speller: A poor speller will be any student whose rank is within the bottom 25 percent of his particular grade group. These students will be referred to as being in the "last quartile".

Grade score: A grade score will express the level of achievement attained by a student or group of students. It is expressed in terms of the whole number representing the grade and each tenth representing one month. A grade score of 5.3 means having attained a level equivalent to

three months in Grade 5.

Gain: The amount of growth or improvement made by a student or group of students. This is expressed in the same way as the grade score. A "gain" of 1.2 indicates a growth of one school year and two months or a total of 12 months.

IV The Experimental Design

The sample for this study consists of 138 students who are presently in Grades 5, 6, 7, 8 and 9, and whose previous spelling scores are on record as part of the standardized assessment of the elementary school which they attended in the period from 1977-1982. Only those students are included who were confirmed to be presently attending one of the three schools in the County of Strathcona, where the original elementary school is located.

A smaller group or sub-sample of 20 students, 4 from each grade group, was selected at random to participate in a structured interview.

The structured interview schedule was developed from information gathered during a pilot study prior to the data collection for this study.

The Morrison-McCall Spelling Scale was administered by the researcher to the 138 students in the sample in a classroom setting. The students were given the test in grade groups with the same directions and in the same manner as in

previous years. This part of the design is referred to as the post-test.

The raw score was recorded for each student. The raw score was then converted to the grade score, based on the norms as established for the Morrison-McCall Spelling Scale.

The mean of the grade scores was calculated for each group for each year of the available scores for the five year period.

The gain in the mean grade score was calculated for each group at each particular grade level over the five year period.

Students in each grade group were categorized into male and female groups to carry out a comparison of the grade score means at each grade level over the five year period.

A rank order of students was established by calculating the mean grade score for each student. The students who placed in the top 25 percent of their particular group are categorized to be "good" spellers, and will be referred to as students in the first quartile. The students who placed in the lowest 25 percent of their particular group are categorized as "poor" spellers, and will be referred to as students in the fourth quartile.

The taped interviews were transcribed and a protocol analysis of the information was carried out. Further comparisons were made between male and female and "good" and "poor" spellers from the information gathered from these interviews.

V Limitations of the Study

The following factors may limit the generalizability of this study to situations beyond its parameters:

1. The sample of students in this study is made up of students from one elementary school in one county system.
2. The students in this study will be from a non-transient population in that only students who have remained in the same area for the past five years will be included in the study.
3. The size of the sample (20 students) upon which the interview data will be based, may be a limitation.
4. The use of the Morrison-McCall Spelling Scale as the testing instrument may be a limitation since it only tests the students on a limited list of words rather than the full extent of their spelling vocabulary in writing situations.
5. Results are not available for all five years for all groups.
6. The data available for tabulation differed from one group to another.

VI Significance of the Study

Since spelling is a part of language, the acquisition of a spelling vocabulary is a part of the written language development of students. Acquiring the ability to spell

correctly the words which are needed for written communication is a developmental process which takes several years.

By looking at the spelling results of students over a period of five years, discernible trends in the patterns of spelling achievement among students with varying spelling ability may indicate more strongly the need for differentiated teaching methods or program adjustments at the various grade levels.

By interviewing a sample of students as to their perceptions of the spelling programs and instruction, new insights may be gained from the students' perspectives on this topic which may indicate changes in the teaching of spelling.

Chapter II

REVIEW OF RELATED LITERATURE

This chapter will examine four areas of spelling research. The first part will be an overview of how word lists for spelling have been developed. Secondly, a summary of the various methods which have been employed in teaching students to spell will be given. The third part deals with the characteristics of students who are "good" spellers or "poor" spellers and finally, a discussion of the levels of achievement of different groups of students will be given. Each of these parts concludes with a summary of the research in these particular areas of spelling.

I Research on the Development of Word Lists

Concern about spelling during the first three decades of this century often focused on determining which words students should be required to learn. Several researchers and authors concentrated their efforts on developing these word lists. Some of the earliest of such "word lists" were compiled by Ayres (1915) and extended by Buckingham (1918) and Tidyman (1921). The criteria for selecting words for these lists was based upon the frequency with which they were used in a wide selection of writing samples of adults from various walks of life and social situations. Thorndike

(1921) published his well-known Teacher's Word Book and extended his original list from 10,000 to the 30,000 most commonly used words with two further editions. Fitzgerald (1934), Smith (1935) and Gates (1937) provided the research for the well-known list compiled by Dolch (1942).

E. Horn (1939) identified the adult writing needs in his book, A Basic Writing Vocabulary, from a tabulation of words from business letters, personal letters, letters to newspapers, letters of application, minutes of meetings in many areas of employment and compared these with the earlier lists.

According to the Encyclopedia of Education Research (1969):

> The spelling needs of children have been determined by tabulating samples of children's writings in school, such as themes and letters composed as school assignments and letters written outside the school (p. 1284).

One of the most extensive studies was Rinsland's (1945) examination of children's writing samples at different grade levels when he provided an analysis of more than 6 million words of discourse. Most studies of children's writing have shown inconsistencies in the frequency rate when a grade-by-grade analysis is carried out and it is only the first 100 most commonly used words such as "the", "to", "was" which appear consistently at every grade level.

In spite of thousands of samples of both children's and adults' writing, there has been little agreement as to which words are used with the greatest frequency past the first 2,000 most commonly used words. Horn (1954) states that the

first 100 most commonly used words comprise 60 percent of all words needed in writing and the first 2,000 words make up 95 percent of words needed by adults and children. O'Leary (1960) states that:

> Therefore, since no one can predict accurately or reveal clearly which words will be used beyond the one thousand commonest words, since spelling books disagree so widely as to what the extra words should be, since children and adults continue to mis-spell the commonest words, it seems reasonable to conclude that a smaller spelling vocabulary to be taught directly can be both justified and definitely recommended (p. 16).

There was, at one time, some concern that most lists were compiled from adult writing samples and school spelling books drew their lists from these sources. Davis (1954), however, compared the 3,000 highest frequency words from the Rinsland (1945) research which was based on children's writing with those of Horn's and Fitzgerald's adult vocabulary and found that only about 7 percent of the Rinsland list did not appear on the Horn list.

The Encyclopedia of Educational Research substantiates this when it states that:

> It is apparent from examination of data reported in studies of adult writing vocabularies and written vocabularies of children that there is considerable overlap between child and adult writing (p. 1283).

Thomas (1974), in an effort to update earlier studies and make them more relevant to a Canadian context, conducted an extensive project in Alberta in 1972. By gathering 25,000 compositions from 35 school jurisdictions across the grades, then choosing 200 compositions randomly from each

grade, he analyzed the frequency of usage with the aid of a computer. With regard to this study, Thomas (1974) states:

> These results tend to support previous findings concerning core vocabularies. In this regard the 100 words most frequently written by Alberta children accounted for 58% of all words used; whereas Rinsland's data indicated 60% for the corresponding word group (p. 14).

Thomas (1974) went on to identify the 2,000 most frequently written words in Grades 1-6 in Alberta, as well as identifying the group of most commonly misspelled words by Alberta students in each of the elementary grades.

The placement of words from the lists into assigned grade levels presented some problems since there is much overlap, especially in the need for the words most frequently used by students at every grade level. Thomas (1974) states:

> Even though most spelling series do assign certain words to particular grade levels, there is very little consistency among publishers with respect to this type of grading (p. 39).

Horn (1954) said the grade placement of words depends on the following factors:

> . . . their spelling difficulty; logical principles, including the development of phonetic generalizations and the progressive building of derived forms from base words; the importance of words in adult writing; and the frequency of use in the writing of school children (pp. 6-7).

Thomas (1974) summarizes this when he says that:

> . . . the primary principle for selection of words for a given grade is the frequency with which words are written by children in that grade. Giving priority to this criterion assures that students will have numerous

> meaningful opportunities to apply these words throughout the school years (p. 39).

There are, however, several spelling series that group words according to phonetic similarities. These authors base their selection on the research carried out at Stanford University by Hanna et al., (1964). With the aid of computerized analysis, this group of linguists puts forth the idea that since there are definite patterns in the spelling of English words, phonic generalizations should be a logical and more efficient way of presenting a spelling vocabulary as long as these words are also a part of the already identified security segment of the spelling vocabulary.

Horn (1960) reminds us that it is not necessary to be able to spell all the words we can read, and as adults we rarely do, but it is necessary to spell correctly the words which we need for our written communication.

In conclusion, it can be stated that although a great deal of research has been carried out with regard to the identification of which words should be learned by all students, there is little consistency beyond the first 1,000 most frequently used words. Since, according to Thomas (1974), students also almost consistently misspell many of these words, it would seem logical that these words should form the nucleus or core of words to be learned in the elementary grades.

II Methods of Instruction

Another area of spelling research has dealt with problems of methodology or how spelling should best be taught. Controversies as to whether spelling should be "caught or taught" (Peters, 1973) began when Rice (1897) and Cornman (1902) advocated that a spelling vocabulary could be acquired "incidentally" or without instruction. This viewpoint was taken up by some and is still held by a few educators. As a result, a trend in schooling emerged which minimized the importance of formal instruction in spelling. For the most part, however, the concern of the general public, parents and educators for students' proficiency in spelling has resulted in the large number of studies in spelling research which deal with improving the methods of instruction in this area.

The typical format for these studies has been the use of an experimental design where the "traditional" or "conventional" method of following an approved basal series is used for the control group and a new or innovative method is used for the experimental group. Two examples of this type of spelling research are those of Nixon (1965) and Reid (1966). The problems encountered in research of this type have largely been due to the variation of the methods themselves due to differences in teaching style and teacher personality. More often, however, the effect of the new method on students' spelling has proven insignificant because the results were based on the short term effect of

the treatment. Nixon's (1965) findings were based on an eight month period. The acquisition of a spelling vocabulary takes several years, and it is dependent upon the individual's rate of learning, as well as the degree of utility which he has for particular words. Henderson and Beers (1980) substantiate this when they state that:

> Over an extended period of time children internalize what they know about their language. They construct tentative rules based on their knowledge and apply those rules to the spelling of words. The studies presented here reveal that a child's knowledge about written words is acquired systematically, developmentally, and gradually. The acquisition process is too complex to be limited to serial learning or word memorization. We know children do learn the English spelling system. What needs more investigation, however, is how they learn the complexities of the system (p. 45).

An issue which is often referred to as "the great debate" in spelling is the dichotomy among educators and researchers as to whether spelling should be taught by teaching rules of phonics referred to as generalizations or whether the spelling of each word must be learned essentially in isolation due to the many irregularities in the spelling of English words. A leading author on one side of the debate is Horn (1954) who stresses the futility of trying to teach phonetic generalizations. On the opposing side are Moore (1951) and Hanna (1953) who, with the support of new and more technically sophisticated research in the area of linguistics, have gathered substantial evidence to point out that English spelling is 87 percent regular and to learn the system of generalizations is time well spent.

Relatively few studies, however, have dealt with the process of spelling as a whole, especially as it occurs differently during the stages of academic development. Personke and Yee (1971), in designing a model of the spelling process, put forth the idea that we employ not just a single, but a variety of channels in spelling words correctly. They state that:

> Research and instruction in spelling have been concentrated on the relevancy or use of one part of one channel of processing behavior. This model indicates that instruction in spelling should include the mastery of all channels of processing and skill at choosing the most suitable channel for the particular situation. When each instance of spelling behavior is viewed as a part of total spelling behavior, present conflicts in spelling theory may be revealed as paper tigers (p. 23).

The acquisition of a spelling vocabulary is developmental and this lends credence to the viewpoint that it takes several years to achieve a level of proficiency. Also, it would seem evident that the strategies which a very young student might employ will differ considerably from those of an older student. Whatever method of instruction is used, the choice cannot be made without considering the students. Hodges (1982) states:

> For most spelling studies in the past have not taken account of how learners themselves view the orthography, but have been undertaken to examine such matters as learning rate, perceptual processes, and other factors that are peripheral to a knowledge of the orthography (p. 286).

Due to the many variables in spelling research designs such as teaching style, teacher personality, student characteristics and choice of materials and books, there is

no conclusive evidence as to which method will bring about the best results. Research studies, however, have helped to identify, describe and define the various approaches or methods of teaching spelling. Studies dealing with methods of instruction in spelling comprise a large area of spelling research. A brief description of these methods is given here.

One of the problems is that the different methods are often not defined clearly enough as to the specific steps which are followed in the teaching procedure. As a result, many variations of each method have evolved over the years due to teachers adapting a method to their individual teaching style and to the uniqueness of their particular teaching situation. The problem, however, is not the variation of the methods within themselves, for this in fact may be desirable, but rather in the labelling of the various methods. For example, the "conventional" method, with only a small difference in the procedure, very much resembles the "Test-Study-Test" method. Yet that small variation represents a major difference in philosophies as to how spelling should or should not be taught, which warrants a separate label or name for each. Another problem in discussing spelling methodology is that researchers and educators sometimes devise "catchy" names in labelling their methods - names which upon closer examination represent only a small, insignificant difference in the terms used, but which otherwise are exactly the same as an existing method.

An example of this is the "Word Perception with Test Method" which has all of the elements of the "conventional" method but calls the word study skills "word perception".

There are, however, a few methods that have very distinct characteristics which are representative of the main philosophies on how children learn to spell. Probably the first four methods discussed in this study are representative of the spelling methods which are most clearly identifiable and most often employed with variations made to accommodate teaching style as well as the particular needs of the students in that classroom.

Methods:

1. Conventional or Traditional or Study-Test

This method is probably the most widely used and still most prevalent in many school systems. Its most distinguishing feature is that there is a prescribed and authorized basal series or textbook for each grade level. Sometimes the prescribed series is in hard-cover textbook form where the students do all the exercises in their notebooks whereas some series appear in consumable workbook types where all the work is done in the book. A few series have both text and workbook and it is left to the teacher's discretion as to which combination will be used in his/her classroom. The text and/or workbook has a weekly word list, a set of questions or activities pertaining to word analysis or phonics skills and suggested steps (procedure) for

learning the words in the list each week. It usually suggests a test at the end of each week to see that the list words have been learned and provisions are made for a review unit at monthly or six-week intervals. The words in the weekly lists of each lesson are words which, according to research, children use and need most often in their writing at that particular grade level. Most of the current spelling series have compiled their lists based on the research of Rinsland (1945) from "A Basic Writing Vocabulary of Elementary School Children" and Horn (1927) on "The Basic Writing Vocabulary". These studies identified words most commonly used by students at a particular grade level. Sometimes the words were grouped according to common phonic or structural elements.

Nixon (1965) refers to the "conventional" method for the control group in his spelling research by saying "they studied common lists of spelling from an authorized workbook using the traditional one group method" (p. 2).

(a) Study-Test-Study

The study-test-study variation of the conventional method usually means that the student must study again the words he missed on the test.

(b) Word Perception with Test

This method used the basal list but added and applied word perception skills such as vowel substitution, consonant clusters, syllabic parts and word endings (Reid, 1966, p. 77).

(c) Word Perception without Test

This method is the same as the afore-mentioned method from research by Reid (1966) with the exception that no weekly test was used.

2. Test-Study-Test

This method is sometimes a variation of the "conventional" method and as such it differs only in that the word list is given as a test prior to study and students concentrate in learning only the words they have misspelled. The students are retested at the end of the week to make sure they have learned to spell those words correctly which they had misspelled at the beginning of the week. Sometimes the basal text or workbook is used as the given list of words. Sometimes, as in the Edmonton Public Schools, the lists are selected from the Horn (1954), Thomas (1974) or Fitzgerald (1951) studies which give the most commonly used words in student writing and assigned to grade levels based on the Rinsland (1945) research. The "study" portion of this method also varies. Sometimes the student merely does whatever he/she finds necessary or most appropriate to do, in order to learn the spelling of a word. This may be by himself or with help from the teacher, a student partner or a parent. Sometimes this part of the lesson for the week simply means doing the set of questions, activities or word study skills in the text or workbook which usually deals with the structural analysis or phonetic aspects of the words. At the end of the week, the test is repeated to see whether all the

words have been mastered. Sometimes only those words which had been misspelled are retested by having the students work with a partner as they dictate the words to each other.

Reid (1966) uses this label for a variation of this method in his research: "They used a basal text, dictation-type testing, oral proofreading and reporting of test scores". In the "study" portion, "teachers did not make application of generalized spelling skills" (p. 77).

3. Individualized

This was the method used by Nixon (1965) for the experimental group in his research project. He described it as:

> . . . the learner is constantly locating his own spelling errors and attacking these errors on a strictly individual basis under guidance of his teacher. Words for personal spelling lists are gathered from individual errors on basic core lists dictated to the entire class by the teachers and from errors on written assignments. Thus the student studies only those words which he cannot spell (p. 2).

(a) Individualized Group

The following two methods are described in research done by Guiler (1955). The author also called this the "Systematic" method. A diagnostic self-test made it possible for each student to discover which words in each unit caused him difficulty. The difficult spot in each of these words was underlined and the student concentrated his study on the difficult spots. The entire class received instruction and practice on those words with which the majority had difficulties. When a limited number of students

had difficulty with a word, the teacher provided individual instruction as to how best it could be learned (Guiler, 1955, p. 234).

(b) Unsystematic

In using this method the students had a spelling book with no provisions made for self-testing or diagnosis of the words in various units (Guiler, 1955, p. 234).

4. Proofreading and Correcting

This method involved writing a composition each day, then having classmates proofread it for errors. Then the errors had to be corrected and the composition was presented to the class orally (Reid, 1966). Bishop (1965) used a variation of this method as well. However, she made the proofreading method "an integral part of a spelling program reinforced by study of the sound-symbol relationships of our English language" (p. 32).

(a) Incidental

This method has the student proofreading all of the writing he/she does and record errors and learn the correct spelling. It is a combination of the "individualized" and the "proofreading" methods but no basal text or word lists are used and there is no teacher involvement in the learning process. Horn (1937) states that "the drawback is that children are limited in their ability to proofread their compositions and so it is proofreading ability which must be increased" (p. 5).

5. Direct

The following two methods were used in England by Winch (1916). The first one involved writing the word on a separate sheet of cartridge paper (11 in. x 15 in.), holding it up for the students. They pronounced the word audibly with the teacher, then spelled it silently for themselves several times. Then the word was withdrawn and the student was asked to write it on his paper. After four days the students were given the words for dictation (p. 93).

6. Indirect

The teacher chose words from the list which could be used together in pointing out peculiarities in the words, e.g. the silent "k" in "knock" and "know". However, no "direct" spelling was done by the students nor the teacher. After four days the students were given the words for dictation (Winch, 1916, p. 93).

7. Diagnostic Method

This method is described by Spache (1940) when he refined a method of analyzing the errors which students make on spelling tests or lists. He suggests that a diagnosis can only be made if the given list is from 100 to 200 words. The resulting errors are then categorized as to whether the errors are due to omissions, reversal of letters, vowel or consonant clusters, or other types of errors. When the categories are tabulated and it is determined where most errors occur, remediation is prescribed based on the diagnosis of the errors.

8. Machine-Instructed or Programmed Spelling

Friedman (1967) used pre-programmed lessons which students used to learn the spelling lists. The program had built-in self-correcting lessons which the students used individually and at their own pace.

The following is a summary chart of some of the various methods and their distinguishing features used in teaching spelling.

Spelling Methods

Method	Variations	Main Characteristics
1. Conventional (traditional)	a. study-test-study b. word perception with test c. word perception without test	- basal series (text or workbook - weekly word list - set of questions or word study skills for each lesson - Test of words at end of week
2. Test-Study-Test		- basal series may be used - sometimes other word lists (Thomas, 1974) are used for dictation - students are tested first and study only those words missed
3. Individualized	a. systematic or individualized group b. unsystematic	- learner locates and records his own spelling errors and studies only those recorded errors may come from errors on lists or written assignments
4. Proofreading and Correcting	a. Incidental	- involves proofreading of all written assignments and

Method	Variations	Main Characteristics
		recording and/or correcting the errors
5. Direct		- in studying the words the student actually practices writing it
6. Indirect		- in studying the words difficulties in spelling are looked at but the word is not written down
7. Diagnostic		- teacher analyzes and categorizes errors and prescribes remediation based on this diagnosis
8. Machine Instructed or Programmed		- pre-programmed self-correcting, individualized lessons to learn spelling lists

The eight methods of teaching spelling which have been identified here are but a few of the methods described in spelling texts, research projects and articles written on the subject. It is obvious that the terms, labels, or names used to differentiate the various methods and their descriptions are very loosely defined and there is much overlap of procedures as well. The following results and findings identify some of the merits and/or drawbacks of the various methods.

1. Nixon (1965) found that there was no indication that

the "Individualized" method was superior to the "Conventional" method. He added that it would appear that pupils in the low group benefit the least when left to study on their own. Children of low ability appear to need more definite direction and teaching. An enthusiastic teacher appears to be the key to success of a spelling program and varieties of procedure often generate enthusiasm, regardless of which specific method is used.

2. Winch, (1916) summarized that in dictation at least, the "direct" method produces better results but that perhaps in original composition an "indirect" method produces better results. He also stated that lessons using the "direct" method are shorter and yet more profitable and that even after a lapse of two months the "direct" method was superior.
3. Reid (1966) found that of the five methods used in his research, (1) Test-Study-Test, (2) Word Perception with Test, (3) Word Perception without Test, (4) Proofreading and Correcting, (5) The Workbook, none of the methods was consistently superior to the others and the results varied from grade to grade. The results did not agree with what might reasonably have been expected - namely that out of five methods, surely one method would have proved itself to achieve better results than the others. However, in looking closely at his

descriptions of the five methods, we find that a basal text word list was used for all of the methods except "proofreading and correcting", therefore, in effect, the students were in fact studying the same words in four of the five methods on a weekly basis. Perhaps this accounts for the fact that no method was "consistently superior". As to the method which used proofreading and correcting but no lists, the errors to be studied were derived from each student's composition and many of those words would be common to the list words at that grade level. He states that, "The fact that none of the methods was consistently superior to the others suggests that teachers be encouraged to develop a method which they feel they can employ most adequately" (p. 82).

4. Friedman (1967), in determining "the effectiveness of machine instruction in the teaching of second and third grade spelling" (p. 366), found that whereas the grade three group was more successful than the group using the conventional method, in the grade two group the conventional method proved more successful than the group using machine instruction.
5. Guiler (1955) found that students who were involved in the systematic method of spelling based on locating the "hard spots" in their misspelled words, made much greater improvement than the group being taught by the "conventional" method.

In addition to these findings, there are many other authors who have evaluated their own research as well as the work of their colleagues in the field of spelling. Horn (1957), for example, who is one of the most familiar names in spelling research, makes these comments which are summarized here:

1. Test-study-test methods are more effective than study-test methods.
2. Individual records of students' spelling are an effective motivational device.
3. Meanings of words must be known before the words are given for spelling mastery.
4. Teaching phonetic analysis is only a limited technique in teaching spelling.
5. The final corrected test is one of the most effective single devices in learning to spell.
6. Studying words in list form is more effective than studying them in context.
7. About 75 minutes per week is suggested as allotted time.
8. Dictionary skills may be an aid in learning to spell.
9. The self-selection of words in an individualized method spelling program must come from a core list as well as the student's writing.

A number of pertinent comments regarding the various aspects of spelling methodology are found in the Encyclopedia of Educational Research. Some of these are summarized here

very briefly:

1. High frequency vocabulary in children's and adults' writing is very similar (Davis, 1954).
2. It is a waste of time to develop local lists of spelling words since research shows only slight variations in the words used from one area to another (Horn, 1967).
3. The seriously retarded speller usually has difficulties in other areas of language arts.
4. Sound-letter generalizations in learning to spell correctly is a feasible method (Hanna, 1966).
5. With regard to homonyms, there seems to be a slight advantage to teaching them separately but this varies from grade to grade and for particular words. For example, the word "two" may be required at the Grade 1 level but it is not necessary or even advisable that "to" and "too" should be taught at the same time, whereas it might be quite appropriate to teach "their", "there" and "they're" at the Grade 5 level.
6. Attention to "hard spots" is a doubtful practice in learning to spell (Roesmeier, 1965) and may be harmful (Tireman, 1930).
7. Distributed learning, that is, short lists of words at a time, is more effective than mass learning or long lists given less frequently. Reviews which occur at short intervals as well as at long intervals are more effective in the retention of words

(Woodworth and Schlosberg, 1954).

8. Visual presentation of syllabied words has no advantage (Horn, 1949), nor does the syllabied oral presentation of words (Horn, 1956).
9. The use of the dictionary depends on the initiative of the student as to how he is motivated to spell correctly.
10. Kinesthetic approach (tracing) is successful with poor spellers or slow learners (Fernwald, 1922).
11. Games, crossword puzzles and apellathons are a motivational device but not a substitute for instruction (Hildreth).
12. With regard to rules or generalizations for spelling words correctly, they should be introduced only one rule at a time and systematically applied and reviewed (Horn, 1960). The emphasis should be on the use of the rule rather than on the rote memorization of the rule.
13. Test-modified-sentence-recall is the best method of giving spelling dictation (Brody, 1944).
14. Test-study-test method is more effective from Grade 3 and up (Gates, 1931).
15. Test-study and study test methods are almost equally effective including Grade 2 (Horn, 1958-60).
16. Corrected test - probably the most effective (Tyson, 1953), provided the student:
    (a) understands purpose

(b) corrects errors immediately

(c) understands that attention to corrections will reduce errors.

This method is more effective with better spellers (Schoephoerster, 1962, p. 1286).

The choice of method and how individual teachers vary each one to suit their teaching styles and personalities is dependent upon the age group, ability and type of students to which it is applied. Whether it is the "traditional" approach of using one of the approved basal series or compiling lists of words which the students must spell correctly to be able to function well in their written communication, the choice of method and its variations must be appropriate for the students and accommodate the particular needs of the individual student within that group. Horn (1960) states:

> Enthusiastic, sympathetic classroom teachers often get good results even though they do not otherwise make use of the most efficient learning procedures. Teachers who use potentially efficient procedures but in a mechanical way, get poor results. There is no reason why enthusiasm, sympathy and efficiency should not be combined (p. 1347).

III Characteristics of Students

Another area of spelling research has been concerned with trying to determine which factors contribute most to the differences between "good" and "poor" spellers. Since in our educational system, the student is grouped with others in classes or grades, it is useful to look at the different groupings in order to see how the individual functions within

that group during the process of acquiring the skills of correct spelling. Are there certain identifiable characteristics within the student which help him to acquire these skills more efficiently? Are there common elements found in groups of students who are proficient spellers, and thirdly, are these factors commonly lacking among poor spellers?

This part will summarize some of the research which has been carried out with regard to these questions.

Many educators and persons involved in spelling research have tried to detect and isolate the factors which contribute most to students being good spellers and whether a lack of ability in these can be the cause for some students being poor spellers. Since in spelling words correctly we use mainly the auditory and visual perception skills, it is factors related to these skills that most often have come under consideration for study and research.

Hartman (1931) wanted to find out whether the excellence of auditory perceptive capacity plays a more dominant role than the visual. In other words, is spelling ability more closely associated with the reactions mediated by the ear or those involving the eye? From a sample of 636 students, Hartman chose 24 top spellers, 21 average spellers and 18 of the poorest spellers. These students were chosen as representative cases after the 636 students had been given a word list from the Thorndike and Horn Word Books. The 63 chosen students were then given four tests dealing with visual

perception and four tests dealing with auditory areas of word perception.

The findings showed that in the visual series only one test which dealt with perceiving words presented at set intervals on a tachistoscope, discriminated the three groups of students from each other. The remaining visual tests and all of the auditory tests failed to discriminate between the three types of spellers.

Based on these findings, it would appear that speed and accuracy of immediate visual recall or perception is one of the dominant factors in spelling proficiency. Also, spelling ability is no more a function of general visual perception than it is of general auditory perception. Hartman states, "Spelling ability is largely dependent upon one special form of visual reaction and not upon general superiority in any sense modality or upon a common integrative capacity (p. 699).

Gates (1926) also attempted to "appraise the functions upon which good reading and spelling depends and to discover the correlations between scholastic proficiency and special organic and functional excellence" (p. 433). For his study he chose 310 school children in Grades 1 to 6 and administered a series of tests to measure certain mental functions such as speed and accuracy in the perception of different kinds of items. The Stanford Binet was given to get an intelligence rating on the students. Two other tests were used to yield measures of capacity as to deficiencies in

the association mechanisms such as auditory or visual memory.

His findings showed that only the tests which used words as materials gave substantial correlations with reading and spelling. Mental age is correlated most highly with reading and spelling and the other verbal tests. There was very little correlation with the non-verbal tests. When the intelligence factor was eliminated, the correlations of reading and spelling with one area of word perception remained relatively high. The tests of associative learning, that is, those dealing with geometric figures, visual and auditory symbols, are not closely related with levels of spelling ability. Gates concluded therefore that of the abilities studied, "word perception is most closely associated with spelling ability whereas intelligence has a reasonable amount of correlation". Tests of perception of geometrical figures of different sorts, digits and associative learning of auditory and visual symbols, show only a slight correlation with spelling ability.

Russell (1955) in a similar study, wanted to compare good and poor spellers on auditory discrimination abilities, specific visual perception, vocabulary and certain mental abilities. For his study he used 250 students from Grades 5 and 6, matched for sex, mental ability and chronological age but differing in spelling ability. The students were divided into two groups of good and poor spellers. They were given the Caffrey Tests of Auditory Discrimination, a test of visual discrimination, a series of vocabulary tests, the

California Reading Test and the S.R.A. Primary Mental Abilities Test.

His findings showed that good spellers at the fifth and sixth grade levels tend to have superior auditory and visual perception. They also scored higher in reading comprehension and on the wide variety of vocabulary tests. They were superior in perception, reasoning, and the total scores of the Primary Mental Abilities Test. The highest correlation with spelling scores were those of the combined auditory-visual and total vocabulary scores. In his conclusion, Russell adds to a previous study of good and poor spellers and states that auditory and visual discrimination abilities seem to be closely related to spelling ability around the third and fourth grade level, but not so closely related at the seventh and eighth grade levels. In this particular study of Grade 5 and 6 students, he found that the upper 27 percent of 250 students, significantly exceeded the lower 27 percent on all 15 tests administered.

Byers (1963) set out to find if there is a relationship between the use of Manuscript or Cursive handwriting and accuracy in Spelling. For the study, 24 Grade 3 teachers in the Santa Barbara City School System volunteered for the project. Grade 3 was chosen because the students would have developed a comfortable competence in cursive writing, since the experiment took place in May, and also their experience with manuscript writing was not too far removed. The schools were classified into two groups, A and B, with each group

comprising a spread in socio-economic level. A four sentence paragraph was dictated and students were asked to write it, using manuscript style. Ten days later the students were asked to write the paragraph again but this time in cursive writing. Byer's original hypothesis was that cursive writing would be more conducive to spelling accuracy than manuscript, but this was not so. The difference in accuracy in the two handwriting styles was statistically insignificant.

Bradford (1954) found that pupils with faulty speech habits particularly in pronunciation, were frequently found among poor spellers.

Anderson (1963) states that sex differences generally favor girls over boys in the whole language arts area, particularly in spelling.

The factor of home conditions reported as being significantly related to spelling achievement, very likely has an effect on a student's overall work habits (Adkins, 1943).

Two of the studies looked at student attributes and how this affected their achievement in spelling.

McGovey (1936) conducted research with a group of 14 elementary school students who were poor spellers but had average or higher intelligence. The reason was to try to determine why these students were poor spellers. Tests were chosen and constructed to measure the factors which contribute to poor spelling. Some of the factors which were examined were handwriting, speed of writing, phonics ability, auditory

and visual acuity, perception and memory. The poor spellers' performances on these tests were compared with 14 good spellers. It was found that 13 of the 14 poor spellers scored poorly on the tests of visual analysis and recognition of word-like characters and all of them had weaknesses in at least two or more of the subtests, whereas the good spellers showed a slight but consistent superiority in all of the tests. She concluded that poor spellers with average and higher intelligence show weaknesses in two or more areas of the factors which contribute to spelling achievement.

Russell (1958) wanted to explore further the relationship between auditory abilities and spelling achievement in the primary grades. He included 85 students from Grades 1-3 in a study in Oakland, California. The students were given a number of standardized tests and a series of tests dealing specifically with auditory discrimination. His findings showed that reading tests which emphasize decoding rather than paragraph meaning correlated more highly with spelling than did the individual auditory tests. However, the combined battery of auditory tests correlated as highly with spelling as did the reading tests dealing with word recognition.

In conclusion, it would seem that there are certain identifiable factors which facilitate the acquisition of competence in spelling for individual students as well as groups of students. Good spellers usually have few weaknesses in visual and auditory perception. They are usually high in vocabulary skills and more often higher in intelligence than

poor spellers. In addition to these factors, there are those which perhaps play a lesser role in determining a student's ability to spell competently, yet in combination with other weaknesses result in lack of achievement and eventually a compounding of problems for the student.

IV Achievement Levels of Students

To what extent are students achieving at an acceptable level of competency in Spelling? This question is often raised whenever the success or failure of public schooling is scrutinized.

Low achievement on spelling tests and more importantly, written work that is littered with spelling errors, have been the concern of parents, students and educators alike.

This part will summarize some of the research and findings which have concerned themselves with achievement in spelling and secondly it will describe some of the factors which seem to affect the achievement in this skill.

Three studies looked at the levels of achievement in spelling.

When Harris (1948) investigated the spelling achievement level of 1,200 secondary school students in the Clearfield, Pennsylvania school district, he found it to be low. In his summary of the results, the average achievement level was from three to four years below the student's actual grade level, according to the norms of the test. The widest gap occurred from Grade 11 and 12 students whose average score in spelling

was at a Grade 7 level. Individual scores ranged from below second grade level to a substantial high school level. He concluded that progress in spelling tended to decelerate when systematic instruction in spelling was terminated, which probably is the case at the high school level and the low achievement is probably the product of students' cumulative school experience.

Personke (1966) wanted to compare the spelling achievement of Scottish and American children to see if there was a significant difference in achievement levels. He also attempted to define the practices that might be responsible for any observed differences. For this study he selected 300 children with ages 7, 11 and 14 in Jackson, Michigan, and 300 children matched in age and sex in West Lothian County, Scotland. The samples were drawn from public schools only and of a similar socio-economic background. The results indicated a clear superiority in spelling achievement for the Scottish students. Personke concluded that the differences in levels of achievement are at least partly due to differences in instruction. One of the major differences he found was that the Scottish children are exposed to much more time devoted to the teaching of phonics generalizations but more importantly, that there exists a close integration of phonics, reading and spelling skills in the primary grades in particular. The integration of these skills for the Scottish students would imply that the phonics generalizations or rules are applied in both the decoding and encoding processes of learning words.

In the American schools, there is a de-emphasis on phonics skills and spelling patterns of words. Another difference is that Scottish children start school a year earlier and have thereby had an extra year of exposure to these skills. An additional factor which Personke felt may have influenced achievement levels in favor of the Scottish children, is that there is a cultural demand placed on Scottish children's achievement in Spelling, due to required entrance examinations and teacher emphasis, which may not be prevalent in the U.S.A.

A study was conducted in Edmonton, Alberta (1978) to compare achievement in reading, arithmetic and language areas of Grade 3 students in the public school system with the results in these subjects from 1956. With regard to spelling, it was found that there was a 13.2 percent increase in spelling achievement from 1956 to 1977 for both boys and girls, even though the 1977 group of Grade 3 students was a year younger. "The improvement in spelling scores for each sex and for both sexes (all subjects) over the 21 years is impressive" (p. 99).

These are but a small sample of research projects which have concerned themselves specifically with the level of spelling achievement of students and some of the factors which affect this achievement. Concern for the poor spelling habits of students has been prevalent for many decades. Periodically, questions are raised by academic and industrial institutions as well as by concerned parents and society at large, as to whether there is, in fact, a

growing deterioration in students' ability to spell words correctly in their written communication. The Edmonton study would appear to dispell this concern as far as looking at average achievement levels of a very large group of Grade 3 students allows. Perhaps a greater concern is whether this would be found to be consistent at other grade levels as well, but more importantly, the concern is more for the individual student's level of spelling achievement within that classroom. To help each student attain a reasonable level of proficiency in spelling which will enable him to function adequately in school and as a member of society, is reason enough to look more closely at factors which contribute to a better level of achievement in spelling.

The Encyclopedia of Educational Research (1969) cites some of the factors which contribute to the difficulties with English spelling.

1. There is a lack of consistent sound-symbol association in the spelling of many words since the alphabet consists of 26 symbols which are used to represent about 2,000 sounds.
2. Many of the words in the English language are of foreign origin, mainly from the French but also from Celtic, Latin, Scandinavian and Germanic languages. The spelling of some of these words has been retained and others have been adapted to English.
3. There was "lack of concern or agreement as to what constituted standard spelling on the part of early

writers and printers" (p. 1283).

In addition to these factors, there are, of course, the whole range of variables found in the students themselves, any one or more of which can greatly affect the level of achievement. Some of these are:

1. Organic or physical disabilities such as impaired vision, hearing or speech facilities or the lack of adequate fine motor control in producing the written symbols efficiently. The lack of co-ordination between seeing words visually, then reproducing them in printing or writing in the proper sequence.
2. Disabilities which are less obvious and therefore more difficult to detect or diagnose, such as poor visual or auditory perception, discrimination and memory.
3. Psychologically based problems which are often too subtle to isolate and remediate in the normal classroom setting, for example, relishing any added attention from the teacher by doing very poorly.
4. Problems with attending to lessons, either because the work is too difficult or the student is otherwise preoccupied with problems of a more personal nature which would seem more important at the time.

The Encyclopedia of Educational Research (1969) suggests that one reason why there might be a decline in the levels of achievement in the U.S.A. is that after "Sputnik", there was a greater emphasis on science and mathematics in schools. "The drop in interest and related activity in spelling noted

in the 1960's may, in part, explain evidence indicating that spelling achievement in the United States may have declined by mid century" (p. 1283).

E. Horn (1960) adds several other reasons as to why spelling achievement levels may have declined, or at least appear to have declined.

1. In spelling research there are great differences in the sample populations and in the sampling procedures used, in the various studies. This often not only makes comparison of the results more difficult, but it greatly limits the extent to which generalizations based on the collected data can be made.
2. The spelling ability of students has a lower prestige value than achievement in subjects such as mathematics or reading.
3. There are differences in the number and the type of words included in spelling lessons. Some teachers stress the correct spelling of specialized words from the content areas to the neglect of core words which the student requires for all written work. Most achievement tests in spelling, however, are comprised of basic or core words. Also, some teachers teach short lists of words very thoroughly whereas others believe in exposing students to a greater number of words but do not expect students to master them.
4. There has, in some cases, been a decline in the systematic teaching of spelling due to conflicting

views or philosophies as to how students learn to spell. This could be the result of erroneously interpreting the values and limitations of incidental learning.

5. Even though research has shown that certain methods have been found to achieve better results, there is still a general use of instructional procedures which have been shown to be inferior.
6. There has been a decline in the amount of student compositions due to an increase in short answer or computer-scored examinations and assignments which require less use of the spelling skills than before.
7. There is conflicting evidence resulting in confusion as to whether it is more, or less, efficient to teach phoneme-grapheme relationships in learning to spell.
8. There has been a lack of systematic appraisal of spelling achievement levels and results are often unclear as to the implications which they hold.

Evidence from some of the research would seem to indicate that there is indeed a decline in the spelling achievement levels of students. Most words found on earlier spelling scales or word lists, now have lower accuracies for Grades 2-8 (Green, 1954). Also, there is an apparent decline in the spelling ability of high school students (Harris, 1948; Ayer, 1951; Furness, 1956).

In answer to the question as to whether students are achieving acceptable levels of spelling proficiency, there are

conflicting viewpoints as well as conflicting findings from research with evidence for both sides. The Edmonton study seems to indicate that at least in the Edmonton Public School System, the Grade 3 students are achieving better results than their counterparts in 1956. Probably the only way that this question can be answered is by further study and research across grade levels and school systems.

Periodically, it is of benefit to the student that the level of achievement in spelling be assessed specifically. Results will determine whether a particular student requires further or specialized diagnosis and remediation before weaknesses are compounded through the accumulation of unmastered skills. Assessment of student achievement also helps the teacher to decide whether she is meeting the needs of students in her class with the existing program or a particular method of instruction. Likewise, information about student achievement provides the administration of schools and school systems with some data as to the effectiveness of current methods, programs and materials, but most importantly, whether learning objectives have been met and the goals of education are being maintained. Occasionally too, educators must take the time to answer the questions of parents and society as to whether students are learning the skills basic to an education, and achievement levels which students have attained can provide a basis for some of the answers. By looking at results in the appropriate perspective, changes can be initiated in programs and methods of instruction but also

the results may be used to substantiate the feeling that learning is taking place for the students and the goals of education are being met.

In reviewing the research available in the area of spelling, four areas have been examined; compilation of word lists, methods of instruction, characteristics of "good" and "poor" spellers, and levels of achievement. Each area has numerous aspects which require clarification and further study. Research has added a great deal to the knowledge but many questions remain as to the actual process of how we acquire the skill of being able to spell correctly.

Chapter III

RESEARCH DESIGN

This chapter describes the research design which was used to examine the spelling achievement and reflections of students over a five year period in the elementary and junior highschool. First, there is a description of the background to this study, followed by a detailed account of the selection of the sample. Next, the testing instrument is described and the structured interview schedule is presented. A description of the procedure is given in detail and the chapter concludes with an account of how the data from the various parts of this study was treated.

I Background to this Study

The following is a brief description of the background to this study, since a part of the data for this study was obtained from previously recorded test results of students in the sample.

In 1977 a new elementary school was opened in the County of Strathcona. The administration, staff and students were new to each other. In addition to the core testing program of the county, a group spelling survey was conducted as part of the assessment for each student. The spelling test used was the Morrison-McCall Spelling Scale. Since the school consisted of only eight classrooms with grades one to five,

the assistant principal administered the tests to all classrooms so that the procedure remained standardized and the directions were the same for each group of students.

This spelling survey was continued each of the subsequent school years as part of the student's assessment. The results were recorded and retained on file in the school office. As the enrolment and staff increased, it was no longer feasible for one person to administer the tests to all classes. Therefore, one teacher from each grade level was trained by the assistant principal in the standardized procedure and specific directions, to administer the test to the classes at that particular grade level. The spelling survey was conducted each year during the second week of every other month, starting with the second week of September. The test results for each student were checked and recorded as part of each student's academic record. It is the scores from the September spelling surveys from 1977 to 1981 which are used as part of the data in this study.

II Selection of Sample

The numerical data for this study is compiled from the spelling achievement scores of the main or large group of students and the descriptive data is derived from a smaller group or sub-sample of students.

Main Sample

The main sample for this study is made up of 138 students

who are presently in grades 5, 6, 7, 8 and 9, and whose spelling scores are on record as part of the standardized assessment at the elementary school which they attended between 1977 and 1982. Only those students are included who were confirmed to be attending the same elementary school or either of the two particular junior highschools in the County of Strathcona in order that they could participate in the post-testing carried out in May, 1982.

Copies of the official school registers were obtained from the principal of the elementary school for the 1977-78 school year. This provided the names of students enrolled in grades 1-5 during that year. The five groups were labelled A, B, C, D and E, and together they comprise the main sample of students for this study.

Table I

Number of Students in Each Grade Group and Those Included in the Sample

Group	# Registered Students	# Students Available for Study	% Registered Students Available for Study	Grade in 1977 -78	Grade in 1981 -82
A	48	36	75%	1	5
B	63	27	43%	2	6
C	61	28	46%	3	7
D	54	23	43%	4	8
E	55	24	44%	5	9
Total	281	138	49%	-	-

Sub-sample

A smaller group or sub-sample of 20 students was chosen at random from each of the groups in the main sample. These students participated in a structured interview in order that the students' perceptions of spelling programs and instruction might be obtained.

No attempt was made to separate the boys and girls in each group for the random selection of interviewees. This accounts for the different numbers of boys and girls selected from each group who participated in the interviews. The total number of students interviewed is the sub-sample of students for this study.

Table II

Number of Boys and Girls from Each Group Who Participated in the Structured Interview

Group	# of Boys	# of Girls	Total
A	2	2	4
B	2	2	4
C	0	4	4
D	3	1	4
E	3	1	4
Total			20

III Testing Instruments

To provide the data for this study, two instruments were

used. The numerical data used to calculate the mean grade scores for the students in the sample, are derived from the Morrison-McCall Spelling Scale. The descriptive data used to obtain information about students' perceptions of spelling programs and instruction is summarized from student responses to a structured interview schedule developed during the pilot study.

Morrison-McCall

The spelling scores recorded for students in this study are based on results obtained from the Morrison-McCall Spelling Scale. A copy of the test is found in Appendix A. The test is described in Buros (1953) in the following way:

> Printed in booklet form it consists of a manual of directions and eight word lists of equivalent average difficulty. All lists are 50 words in length. Each list contains words which range in difficulty from words judged easy enough for primary grade pupils to words considered suitable for testing capable junior highschool pupils (p. 205).

With regard to the selection of the words on these lists, Buros (1953) further states that:

> Words in this scale were selected from the "Buckingham Extension of the Ayres Spelling Scale". Only words that were among the first 5,000 in Thorndike's original "Teacher's Word Book" were included. The reviewer checked one of the lists against Horn's (1927) list of 10,000 words most commonly written by adults and the Rinsland (1945) list based upon children's writing. . . . Of the 50 words analyzed, 96% were among the first 5,000 on Horn's list and 78% were among the first 5,000 words which Rinsland's research shows are used by eighth grade pupils. This lends support to the conclusion that the test words are, for the most part, those commonly used in the writing of adults and upper grade children (p. 205).

With regard to the use of a standardized test in spelling in general, several authors such as Horn (1950), Hildreth (1955), Bruechner and Bond (1955) and Blair (1956) confirm its usefulness as a part of student assessment. O'Leary (1960) who used the Morrison-McCall Spelling Scale in her study states that:

> Strickland (1957) maintained that standardized spelling tests have a place in the evaluation program because children learn some spelling without direct teaching, and a standardized test will give some indication of the power that has been gained in spelling (p. 30).

For the purpose of this study, the grade equivalent scores based on the norms of the Morrison-McCall Spelling Scale are used in reporting the findings and in the analysis of the data.

The norms of the Morrison-McCall Spelling Scale are based on a large sample of students in the eastern United States. In reviewing the test, Buros (1953) states:

> The tables of norms are based on scores from 57,333 pupils in the rural and village schools of New York State. The norm group included about 8,000 pupils in each grade from 2-8 and about 1,000 ninth graders (p. 205).

There is, however, no data on reliability or validity for the tests.

The findings in this study are reported in Grade scores. A score of 4.1 means one-tenth of a year above grade four. Since the school year has ten months, it can also be stated that each tenth represents one month at a particular grade level. Therefore, a score of 5.3 means at a level of grade

five and three months. A gain of ten months denotes one grade level and is recorded as 1.0.

The Morrison-McCall Spelling Scale was chosen because it is one of the few standardized spelling achievement tests that is suitable to test the spelling ability of a wide range of students (from grade two to the upper ninth grade) with manageable lists of 50 words. On the other hand, it is this feature which is a disadvantage in scaling the raw scores to grade level norms. Buros (1953) explains it in this way when he states:

> Because the same words are used in testing pupils widely separated in grade classification, the norms reflect the sharp scaling made necessary. This places great emphasis upon the correct spelling of a single test word. Thus a pupil correctly spelling 41 words earns a grade status of 8.0 while a pupil spelling two more words correctly earns a grade status of 8.8 (p. 210).

Although the Morrison-McCall was developed in 1923, the words in the lists as stated previously, were selected from the Buckingham Extension of the Ayres Spelling Scale which is still used as the testing instrument in many more recent studies such as Nixon's (1965) Experimental Study in Individualized Spelling.

The Morrison-McCall was especially suitable for this study since it involved a series of testing intervals followed by a post-test situation. Buros (1953) substantiates this with the comment: "This test has undoubtedly been a valuable measuring instrument. In certain 'then and now' comparisons, it may still have value. . . . (p. 210).

Interview Schedule

A structured interview schedule was developed from information gathered during the pilot study. The interview schedule consisted of a set of questions which were used as a guideline for the discussion with each student throughout each interview to obtain information about the students' perceptions of spelling programs and the instruction in spelling which they received over the corresponding five year period. The interview schedule is found in Appendix B.

IV Procedure

The procedure which was followed in obtaining the data for this study is described by dealing firstly with the previously recorded spelling scores, secondly, dealing with the post test results, and finally, with the information compiled from the structured interviews.

Recorded Spelling Scores

The spelling achievement scores which had been recorded as grade score equivilants based on the norms of the Morrison-McCall were obtained from the principal of the elementary school for each student in the sample.

These scores had been recorded only at the elementary school which these students attended for grades 1-5, therefore the available scores vary for each of the five groups over the five year period. For Group A, scores were available from 1978-1982. For Group B, scores were available

from 1977-1980. For Group C, scores were available from 1977-1978. For Group D, scores were available for 1977 and 1978. For Group E, only the scores from 1977 were available.

Post-test Spelling Scores

All students in the sample were given the Morrison-McCall Spelling Scale in May, 1982. This provided the post-test results to be used as part of the data for this study. The same standardized testing procedure was used as for the previously recorded spelling scores. These scores were also reported in grade equivalents based on the norms of the Morrison-McCall.

Table III

Group and Year for Which Spelling Scores were Available for this Study

Group	Sept. 1977	Sept. 1978	Sept. 1979	Sept. 1980	Sept. 1981	Post-test May 1982
A	-	X	X	X	X	X
B	X	X	X	X	-	X
C	X	X	X	-	-	X
D	X	X	-	-	-	X
E	X	-	-	-	-	X

Note: The "X" denotes the year and grade group for which the spelling results are tabulated and used as data for this study.

Structured Interviews

In addition to the numerical data recorded for this study,

information gained from the structured interviews with the 20 students of the sub-sample was used to report students' perceptions of spelling programs and instruction. The random selection was made by assigning a number to each student in each group, then selecting four numbers from each of the five groups. Each student therefore, within his/her grade group, had an equal chance of being chosen for the interview. The prepared interview schedule was used with each interviewee and a taped recording was made of the discussion during the interview.

V Treatment of Data

The treatment of data is described in three parts. The first part pertains to the treatment of the previously recorded spelling scores, the second part deals with the post-test results, and the final section describes the treatment of the information obtained from the structured interviews.

Recorded Spelling Scores

The recorded spelling achievement grade scores are tabulated for each student in each group at the different grade levels. The mean grade score is calculated for each group at each particular grade level. The mean grade score is calculated for each grade level. The mean grade scores at each grade level are compared in order to determine if there are identifiable trends in the grade scores from one grade to

another.

The amount of gain or improvement in the grade score from one grade level to another is recorded for each group. The mean score of the amount of gain is calculated for each grade level. These scores are used to compare the amount of gain which occurs at the different grade levels.

The mean of the grade scores was calculated for the boys in each group and compared to the mean grade scores of the girls in each group, at each particular grade level.

The amount of gain made by the boys is compared to the amount of gain made by the girls in each group and at each grade level.

The difference in the amount of gain made by the boys is compared to the amount of gain made by the girls at each grade level.

In order to establish a rank order of students from high to low, the mean of each student's available grade scores was calculated. The students who ranked in the top 25 percent of each group are referred to as the first quartile and those who ranked in the bottom 25 percent are referred to as the fourth quartile. The mean grade scores of students in the first quartile were compared to the mean grade scores of students in the fourth quartile at each grade level.

The amount of gain made by students in the first quartile from one grade to another, was calculated and compared to the amount of gain made by students in the fourth quartile.

The range of the mean grade scores for each group was calculated by identifying the highest grade score and the lowest grade score achieved by a student at a particular grade level and then calculating the difference between these two scores.

Post-test Spelling Scores

The grade scores for each student in the study were tabulated and recorded. The mean grade score was calculated for each group and recorded for each grade level.

The amount of gain made per year since the last time of testing was calculated for each group at the different grade levels.

The amount of gain made per year by students in the first quartile was compared to the amount of gain made by students in the fourth quartile.

The amount of gain made per year by the boys in each group is compared to the amount of gain made by the girls in each group at each grade level.

The amount of gain made by each group in five years from the first test to the post-test was calculated.

The amount of gain made by students in the first quartile in five years was compared to the amount of gain made in five years by students in the fourth quartile.

The amount of gain made by boys in five years was compared to the amount of gain made by the girls in the five

year period from the first test to the post-test.

The grade score means are compared to determine if there are identifiable trends in the progress of students over the five year period.

Structured Interviews

The questions and responses from the tape-recorded interviews were tabulated on an outline corresponding to the structured interview schedule. The responses were categorized according to the question to which they refer, with the actual short phrases of the students' replies. The responses to each of the questions in the structured interview schedule are summarized in the findings.

This chapter has been a description of the research design used for this study, with regard to the background, the sample, the testing instruments used, the procedure and finally, how the data was treated in summarizing the findings and conclusions.

Chapter IV

ANALYSIS OF DATA AND SUMMARY OF FINDINGS

This chapter is divided into five sections. The first section contains the data of the recorded spelling achievement mean scores of five groups of students at different grade levels over the five year period. Section two contains data used to compare the spelling achievement mean scores of the boys to the mean scores of the girls in each of the groups at the different grade levels over the five year period. The third section contains the data used to compare the spelling achievement mean scores of students in the first quartile to the mean scores of the students in the fourth quartile at each grade level over the five year period. The fourth section reports the information obtained during the structured interview and the final section is a summary of the findings.

I Comparison of Grade Scores Over Five Years

Table IV contains the data of the recorded spelling achievement mean grade scores for the five groups of students as they occurred at the different grade levels over the five year period. Part (a) shows the mean grade scores for each of the groups A, B, C, D and E, which were calculated from scores made available from school records of each student within that group. The mean grade score for each grade level

is calculated and indicated for each grade in this table.

The increase in the grade score mean at each grade level indicates that all groups made gains or improved from one year to another in that they achieved a higher grade score than the previous year. Due to the variation in the makeup of each group, the mean grade scores vary from group to group at each particular grade level. Consequently, Group B achieved a mean grade score of 6.2 in Grade 5, whereas Group D achieved a mean grade score of 5.5 in the same grade.

Part (b) of Table IV shows the mean grade scores achieved by each group on the post-test administered during May, 1982.

These scores indicate that all groups had a higher grade score since they were last tested. Again, due to the variation of students from one group to another, Group B had a higher mean score in Grade 6 than Group C who are in Grade 7.

Table V shows the amount of gain made by each group at the different grade levels.

Part (a) indicates that the largest gain for the combined groups occurred at the Grade 3 level (1.4), and the second largest gain occurred at the Grade 2 level (1.3). The least amount of gain for the combined groups occurred at the Grade 4 level.

Part (b) shows the mean gain made by each group in each year since they were last tested. This was calculated by

Table IV

Grade Score Means of the Five Groups

	(a) Recorded Grade Score Means					(b) Post-test Grade Score Means				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	2.8	3.7	5.2	5.9	6.3				
Group B		2.6	4.2	5.4	6.2	-	7.7			
Group C			3.2	4.7	5.7	-	-	7.6		
Group D				4.5	5.5	-	-	-	8.8	
Group E					5.8	-	-	-	-	9.3
Mean		2.7	3.7	5.0	5.8					

Table V

Amount of Gain for Each Group

	(a) Gain of Each Group at Each Grade Level					(b) Gain Per Year Since Last Test					(c) Gain in Five Years
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9	
Group A	-	.9	1.5	.7	-	.4					3.5
Group B		1.6	1.2	.8	-	-	.8				5.1
Group C			1.5	1.0	-	-	-	.6			4.4
Group D				1.0	-	-	-	-	.8		4.3
Group E					-	-	-	-	-	.7	3.5
Mean		1.3	1.4	.9							4.2

taking the last available score of each group and the results of the post-test and dividing the difference by the number of years which have elapsed since the last test.

The scores indicate that Groups B and D made the most gain per year since the last time they were tested (.8). Group A made the least gain but this perhaps is due to the fact that there is not a full year between the last time they were tested and the post-test in May. Except for this slight disadvantage for Group A, the gain per year for each group is very similar. No group made a full gain of one year during each school year since the last time they were tested but there is a range of .4 between the group which made the greatest gain per year and the group which made the least amount of gain.

Part (c) shows the total mean gain made by each group over the five year period, from the first time they were tested in 1977 to the post-test in 1982. Only Group B gained five grade levels in five years. The mean gain for all five groups over the five year period is 4.2. There are several factors which may be contributing to the results of these findings. First of all, Group B is somewhat unique in that their scores throughout this study were higher than the other groups. Secondly, as to the lack of five year gain over five years for the other groups, it may be due to the type of spelling programs currently in use in the schools or the limitation of the Morrison-McCall Spelling Scale in failing to test the full range of spelling ability of top

students, thus affecting a ceiling in the grade scores in the upper grades.

Table VI shows the mean amounts above grade at which each of the groups functioned at each particular grade level. The significance of this information is that students are grouped in the school system according to grades, which in most cases, correspond with the chronological age of the students rather than their ability to cope with the particular program which is offered in that class. Spelling programs used in schools are designed for the "average" student in that particular grade level. A student whose spelling ability is much lower than the program with which he must cope is at a great disadvantage. A group of students where many within the group are weak in spelling ability, or functioning much below grade level, are often defeated by the difficulty of the program, and unless they are endowed with an aware teacher, will find it difficult to make the expected progress.

Part (a) shows the amount above grade level for each grade. The scores indicate that at the Grades 2, 3, 4 and 5 level, the groups in total functioned almost one year above grade level. The highest score occurred at the Grade 4 level where the mean for the combined groups is 1.0 or an entire school year.

Part (b) shows the amount above grade level for each of the groups based on the results of the post-test. The scores indicate that the amount above grade level diminishes as the

grade level increases. The exception is Group B who remain the highest group above grade level, whereas Group D, according to the results from the post-test, are functioning six months below grade level. Groups C and D end up being below grade level, even though they started out in the elementary grades as being above grade level. This could be attributed to the spelling programs used in the schools which limit the progress of the top students since they are designed for the "average" student and do not adequately accommodate the low students. Also, it may be due to the compressed norms due to scaling of the Morrison-McCall Spelling Scale, which occurs more so at the upper grade levels than the lower grade levels.

Part (c) shows the means of the amount above grade level for each of the groups. Group B functioned at 1.0 or one year above grade level, whereas Group D was at .1 or one month above grade level. This is a range of .9 or a nine months difference between these two groups.

In comparing Part (b) and Part (c), the scores indicate that the mean of the amounts above grade level in the lower grades is .8 whereas in the upper grades it is .1 which is a difference of seven months.

This concludes the section on comparing the grade scores, amount of gain and the amount above grade level for each of the five groups at the different grade levels over the five year period.

Table VI

Amount Above Grade Level

	(a) Recorded Grade Scores					(b) Post-test Grade Scores					(c) Mean Above Grade Level
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9	
Group A	-	.8	.7	1.2	.9	.4					.8
Group B		.6	1.2	1.4	1.2		.8				1.0
Group C			.2	.7	.7			-.3			.3
Group D				.5	.5				-.1		.3
Group E					.8					-.6	.1
Mean		.7	.7	1.0	.8	.8				.1	.5

Comparison of Boys' Spelling Scores and Girls' Spelling Scores

The following section will deal with the comparison of the boys' spelling scores in each group and the girls' spelling scores in each group at the different grade levels over the five year period. The comparisons will be made in terms of the amount of gain of boys and girls, the difference in the scores of the boys and girls and the amount which each group is above grade level in the various grades.

Table VII (a) shows the mean grade level scores for the boys in each group at each particular grade level. Table VIII (a) shows these scores for the girls in each group at each particular grade level. The mean grade scores are almost identical for the two groups.

Table VII (b) shows the mean grade level scores for the boys, based on the results of the post-test. Table VIII (b) shows these scores for the girls in each group based on the results of the post-test. The scores indicate that the difference in the mean grade scores between the boys and the girls, is very small in the elementary grades and increases considerably in Grades 7, 8 and 9 in favor of the girls.

Table IX (a) shows the amount of difference between the mean grade scores of the boys and the mean grade scores of the girls. The scores indicate that from Grades 2 to 5 there is a .2 difference at most in favour of the girls at the Grade 5 level. There is no difference at the Grade 4

Table VII

Grade Level Mean Scores for Boys

	(a) Recorded Mean Scores					(b) Post-test Mean Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	2.7	3.6	5.1	5.9	6.3				
Group B		2.7	4.3	5.5	6.4	-	7.8			
Group C			3.0	4.6	5.4	-	-	7.3		
Group D				4.5	5.2	-	-	-	8.5	
Group E					5.5	-	-	-	-	8.7
		2.7	3.6	4.9	5.7					

Table VIII

Grade Level Mean Scores for Girls

	(a) Recorded Mean Scores					(b) Post-test Mean Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	2.9	3.8	5.2	5.8	6.3				
Group B		2.6	4.0	5.2	5.9	-	7.4			
Group C			3.2	4.8	5.8	-	-	7.8		
Group D				4.5	5.7	-	-	-	9.2	
Group E					6.3	-	-	-	-	10.1
		2.8	3.7	4.9	5.9					

level and only a .1 difference in Grades 2 and 3. With regard to the differences from one group to another, the difference is almost consistently in favour of the girls except for Group B where it is in favour of the boys.

Table IX (b) shows the difference in the mean grade scores based on the post-test. The difference increases directly with the grade in favour of the girls, except for Group B where the boys again have a higher mean grade score. There is no difference in the mean grade scores of the boys and girls at the Grade 5 level. In Grades 7, 8, and 9, the difference in the mean grade scores is increasingly higher for the girls.

Table X (a) shows the gain made by the boys at each grade level. Table XI (a) shows the gain made by the girls at each grade level. The scores indicate that there is a one month difference in gain between the boys and girls at the Grade 2 and Grade 4 level. The gain is the same for both at the Grade 3 level. Both boys and girls made larger gains at the Grade 2 and 3 level than at the Grade 4 level. The scores of the boys and girls are almost identical.

Table X (b) and XI (b) show the gain made each year from the last test to the post-test in May of 1982. In each group there is only a difference of one month at the particular grade levels.

Tables X (c) and XI (c) show the gain made by each group of boys and girls in the five year period from the first time they were tested, to the post-test in May, 1982. The scores

Table IX

Difference in Mean Grade Scores Between Boys and Girls

	(a) Recorded Mean Scores					(b) Post-test Mean Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	.2	.2	.1	.1	.0				
Group B		.1	.3	.2	.5	-	.4			
Group C			.2	.2	.4	-	-	.5		
Group D				.0	.5	-	-	-	.7	
Group E					.8	-	-	-	-	1.4
Mean		.1	.1	.0	.2					

means in favour of the boys

Table X

Amount of Gain in Mean Grade Scores of Boys

	(a) Amount of Gain of Each Group at Each Grade Level					(b) Gain Per Year Since Last Test					(c) Gain in Five Years
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9	
Group A	-	.9	1.5	.8	-	.4					3.6
Group B		1.6	1.2	.9	-	-	.7				5.1
Group C			1.6	.8	-	-	-	.6			4.3
Group D				.7	-	-	-	-	.8		4.0
Group E					-	-	-	-	-	.9	3.2
		1.3	1.4	.8							4.0

Table XI

Amount of Gain in Mean Grade Scores of Girls

	(a) Amount of Gain of Each Group at Each Grade Level					(b) Gain Per Year Since Last Tested					(c) Gain in Five Years
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9	
Group A	-	.9	1.4	.6	-	.5					3.4
Group B		1.4	1.2	.7	-	-	.8				4.8
Group C			1.6	1.0	-	-	-	.7			4.6
Group D				1.2	-	-	-	-	.9		4.7
Group E					-	-	-	-	-	.8	3.8
		1.2	1.4	.9							4.3

vary from group to group with Groups A and B boys making the greater gain than the girls in these groups and in Groups C, D and E the girls making the greater gain. Over all, however, the girls made a greater gain of nine months than the boys. There is no consistent trend in the differences.

Table XII shows the difference in the amount of gain made by the boys and the amount of gain made by the girls.

Part (a) indicates that the difference in the amount of gain between the boys and girls in each group is very small at the Grade 2 and 4 levels. There is no difference in the amount of gain at the Grade 3 level.

Part (b) of the table indicates that based on the post-test, the amount of gain made per year by boys is almost identical to the amount of gain made per year by the girls.

Part (c) indicates that in Groups A and B the boys made a larger gain than the girls in the five years from the first test to the post-test. For Groups C, D and E, the girls had the greater amount of gain in the five years from the first test to the post-test.

Table XIII shows the amount above grade level at which the boys functioned at each grade level. Table XIV shows the amount above grade level at which the girls functioned at each grade level.

The scores in Tables XIII (a) and XIV (a) indicate that in Grades 2 and 3, the girls functioned one month higher than the boys. At the Grade 4 level, boys and girls were the same, whereas in Grade 5 the girls were two months higher than the

Table XII

Difference in the Amount of Gain Between Boys and Girls

	(a) Difference in the Amount of Gain at Each Grade Level					(b) Difference in the Amount of Gain Per Year Since Last Tested					(c) Difference in the Amount of Gain in Five Years
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9	
Group A	-	.0	(.1)	(.2)	-	.1					(.2)
Group B		(.2)	.0	(.2)	-	-	.1				(.3)
Group C			.0	.2	-	-	-	.1			.3
Group D				.5	-	-	-	-	.1		.7
Group E					-	-	-	-	-	.1	.6
Mean		.1	.0	.1							.3

( ) in favour of boys

Table XIII

Amount Above Grade Level - Boys

	(a) Recorded Grade Scores					(b) Post-test Grade Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	.7	.6	1.1	.9	1.3				
Group B	.7	1.3	1.5	1.4		1.8				
Group C		.0	.6	.4			.3			
Group D			.5	.2				.5		
Group E				.5					-.3	
		.7	.6	.9	.7					

Table XIV

Amount Above Grade Level - Girls

	(a) Recorded Grade Scores					(b) Post-test Grade Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	.9	.8	1.2	.8	1.3				
Group B	.6		1.0	1.2	.9		1.4			
Group C		.2		.8	.8			.8		
Group D			.5		.7				1.2	
Group E					1.3					1.1
		.8	.7	.9	.9					

boys.

The scores in part (b) indicate that Group A boys were the same amount above grade level. In Group B, the boys were four months higher than the girls. In Groups C, D and E, the girls functioned higher above grade level than the boys.

Overall, however, there are no consistent differences in the amount above grade level at which the boys scored in comparison to the girls. Any variation which is indicated by the scores may be due to the differences in the groups.

Comparison of Spellers in the First Quartile to Spellers in the Fourth Quartile

This section will deal with the comparison of spellers in the first quartile to spellers in the fourth quartile. The first part shows the number of students in each quartile whose scores are used to make the comparisons and the number of boys and girls whose scores placed them in the first and fourth quartiles.

Table XV indicates the number of students whose scores were used to compare the spelling achievement scores of students in the first quartile to the spelling achievement scores of students in the fourth quartile in each group and at each particular grade level. In all the scores of 35 students in the first quartile were compared to the scores of 35 students in the last quartile. Altogether the scores of 70 students were used in the comparison of the two groups at the different grade levels over the five year period.

Table XV

Number of Students in the First and Fourth Quartile

Group	# of Students in First Quartile	# of Students in Fourth Quartile	Total
A	9	9	18
B	7	7	14
C	7	7	14
D	6	6	12
E	6	6	12
Total	35	35	70

Table XVI

Number of Boys and Girls in the First and Fourth Quartile

	Top Quartile		Bottom Quartile		
Group	Boys	Girls	Boys	Girls	
A	6	3	7	2	
B	5	2	5	2	
C	1	6	3	4	
D	3	3	4	2	
E	1	5	4	2	
Total	16	19	23	12	70
Average # Per Group	3.2	3.8	4.6	2.4	

Table XVI indicates that in the first quartile, there are almost an equal number of boys and girls, whereas in the last quartile there are almost twice the number of boys than girls.

The number of boys and girls in the first and fourth quartile varies from one group to another. In Groups A and B there are more boys in the first quartile and also more boys in the fourth quartile. In Group C there are more girls in the first quartile and an almost equal number of girls in the fourth quartile. In Group D there is an equal number of boys and girls in the first quartile whereas in the fourth quartile there are twice as many boys as girls. In Group E there are more girls in the first quartile and more boys in the bottom quartile.

The following compares the mean grade scores of students in the first quartile to the scores of students in the last quartile at each grade level over the five year period. This is followed by a comparison of the amount of gain which each of these groups made at each grade level over the five year period.

Table XVII shows the grade score means of spellers in the top quartile at each particular grade level.

Table XVIII shows the mean grade scores of spellers in the low quartile at each particular grade level.

The scores indicate that both groups increased their grade scores as they proceeded from one grade to another, but the difference in the mean grade scores becomes greater

Table XVII

Grade Score Means of Spellers in the First Quartile

	(a) Recorded Grade Score Means					(b) Post-test Grade Score Means				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	3.5	4.6	6.3	7.4	8.0				
Group B		3.1	5.1	6.7	8.0	-	9.8			
Group C			3.9	5.6	6.7	-	-	8.8		
Group D				6.1	6.9	-	-	-	10.8	
Group E					7.8	-	-	-	-	11.5
		3.3	4.5	6.2	7.4					

Table XVIII

Grade Score Means of Students in the Fourth Quartile

	(a) Recorded Grade Scores					(b) Post-test Grade Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	2.2	2.8	3.9	4.3	4.9				
Group B		2.3	3.3	4.1	4.7	-	6.2			
Group C			2.5	4.0	4.5	-	-	6.3		
Group D				2.8	4.2	-	-	-	6.6	
Group E					3.8	-	-	-	-	7.2
		2.3	2.9	3.7	4.3					

with each grade.

Table XIX shows the amount of difference between the scores of spellers in the first quartile and in the scores of spellers in the fourth quartile.

Part (a) scores indicate that the difference increases or becomes greater with each grade. In Grade 2, the difference between spellers in the top quartile and spellers in the low quartile was one year, one month, and by Grade 5 the difference increased to three years.

The scores in part (b) also indicate an increase in the difference between the spellers in the top quartile and spellers in the low quartile. Groups B and C are the exception to this, yet as groups they follow the same trend. There seems to be a lack of growth for students in the first quartile as indicated by the mean grade scores of the post-test. This may be due to the lack of more challenging spelling programs for the top students in the schools, as well as the depressed ceiling effect of the Morrison-McCall norms. Sometimes too, the students in the fourth quartile receive remedial help.

The mean of the difference at the Grades 2-5 level is two years, one month, whereas the mean of the difference in the Grades 5 to 9 is three years, five months.

Table XX shows the gains made by spellers in the top quartile at each particular grade level.

Table XXI shows the gains made by spellers in the low quartile at each particular grade level.

Table XIX

Difference in Mean Grade Scores Between Students in the First Quartile and Students in the Fourth Quartile

	(a) Recorded Grade Scores					(b) Post-test Grade Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	1.3	1.8	2.4	2.7	3.1				
Group B		.8	1.8	2.6	3.3	-	3.6			
Group C			1.4	1.6	2.2	-	-	2.5		
Group D				3.3	2.7	-	-	-	4.2	
Group E					4.0	-	-	-	-	4.3
		1.1	1.7	2.5	3.0					3.5

Table XX

Amount of Gain Made by Spellers in the First Quartile

	(a) Gain at Each Grade Level					(b) Gain Per Year Since Last Test					(c) Gain in Five Years
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9	
Group A	-	1.1	1.7	1.1	-	.6					4.5
Group B		2.0	1.6	1.3	-	-	.9				6.7
Group C			1.7	1.1	-	-	-	.7			4.9
Group D				.8	-	-	-	-	1.0		4.7
Group E					-	-	-	-	-	.7	3.7
		1.6	1.7	1.1	1.5					.8	4.9

Table XXI

Amount of Gain Made by Spellers in the Fourth Quartile

	(a) Gain at Each Grade Level					(b) Gain Per Year Since Last Tested					(c) Gain in Five Years
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9	
Group A	-	.6	1.1	.4	-	.6					2.7
Group B		1.0	.8	.6	-	-	.8				3.9
Group C			1.5	.5	-	-	-	.6			3.8
Group D				1.4	-	-	-	-	.6		3.8
Group E					-	-	-	-		.7	3.4
		.8	1.1	.7	.9					.7	3.5

The scores in part (a) indicate that spellers in both the top quartile and low quartile made gains as they progressed from one grade to another. Both groups made the largest gain at the Grade 3 level. In Grade 2, the spellers in the top quartile made twice the gain as the students in the low quartile. This indicates a rapid gain for students in the first quartile.

The scores in part (b) of Tables XIX and XX indicate that spellers in the top quartile made almost the same gain per year as the spellers in the low quartile with only a difference of one month. The gain slows down for students in the top quartile until it is about equal for both groups.

The scores in part (c) of Tables XIX and XX indicate that the spellers in the top quartile made a gain of four years, nine months, whereas the spellers in the low quartile made a gain of three years, 5 months during the five year period. Since this is only a difference of 1.4 over the five year period, it is surprising that there is not a greater difference in gain for the students in the first quartile.

Tables XXII and XXIII show the amount that spellers in the top quartile and spellers in the low quartile are above (or below) grade level at various grade levels.

The scores in part (a) indicate that the amount above grade level increases with each grade level for the spellers in the top quartile in Grades 2-5. For the spellers in the low quartile, there is an increase in the amount of drop

Table XXII

Amount Above Grade Level of Spellers in First Quartile

	(a) Recorded Grade Scores					(b) Post-test Grade Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	1.5	1.6	2.3	2.4	2.1				
Group B		1.1	2.1	2.7	3.0	-	2.9			
Group C			.9	1.6	1.7	-	-	.9		
Group D				2.1	1.9	-	-	-	1.9	
Group E					2.8	-	-	-	-	1.6
		1.3	1.5	2.2	2.4					
					1.9					1.9

Table XXIII

Amount Above Grade Level of Spellers in Fourth Quartile

	(a) Recorded Grade Scores					(b) Post-test Grade Scores				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	.2	-.2	-.1	-.7	-1.0				
Group B		.3	.3	.1	-.3	-	-.7			
Group C			-.5	.0	-.5	-	-	-1.6		
Group D				-1.2	-.8	-	-	-	-2.3	
Group E					-1.2	-	-	-	-	-2.7
		.3	-.1	-.3	-.7					
					-.2					-1.7

- indicates below grade level

Table XXIV

Range of Grade Scores for Each Group at Each Grade Level

	(a) Based on Recorded Scores					(b) Based on Post-test Results				
	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 9
Group A	-	2.6	3.2	3.5	5.6	5.9				
Group B		1.8	3.1	3.6	6.2	-	5.6			
Group C			1.8	3.1	4.2	-	-	6.1		
Group D				4.2	4.6	-	-	-	8.0	
Group E					6.4	-	-	-	-	6.4
		2.2	2.7	3.6	5.4					6.4
					mean	3.5				mean

below grade level from Grades 2-5. Spellers in the top quartile have a mean score of 1.9 above grade level in these grades, whereas spellers in the low quartile have a score of two months below grade level in these grades.

Part (b) of the table indicates that spellers in the top quartile stay above grade level in Grades 5-9, whereas spellers in the low quartile drop even further below grade level in these grades.

Table XXIV, part (a) indicates that the range of scores increases with each grade level in Grades 2-5. The narrowest range is indicated at the Grade 2 level (2.2) and the widest range occurred at the Grade 5 level (5.4). The mean range in the elementary grades is 3.5.

Part (b) of Table XXIV indicates that based on the post test results, the range in Grades 5-9 varies from one group to another. Group D had the widest range (8.0) and group B had the narrowest range (5.6). The mean of the ranges of the post-test results indicates a range of 6.4 for Grades 5-9. This is almost double of what it was in the elementary grades.

Summary of Findings of Numerical Data

In considering the numerical data of spelling achievement scores of these groups of students at various grade levels over the five year period, several observations can be made.

(1) The mean grade scores of all groups increased from one year to another at each grade level although the amount of gain varied from one group to another

at the particular grade levels. The gain seems to increase up to Grade 4 and gradually decreases, particularly at the junior highschool grades.

(2) The spelling achievement scores of boys is almost identical to the scores of the girls in Grades 2-6. There is a difference in favour of the girls at the Grades 7-9 levels.

(3) In comparing the spelling achievement scores of students in the first quartile to the scores of students in the fourth quartile, the difference increases with each grade and is highest at the Grade 9 level. There are almost the same number of boys as girls in the first quartile but twice as many boys than girls in the last quartile. This would indicate that there are as many boys who are "good" spellers as girls but that there are more "poor" spellers who are boys.

This concludes the analysis of the numerical data of this study.

Analysis of Interviews

The following is a summary of the responses which students made during the structured interview. The purpose of the interview was to ascertain the students' perceptions of spelling programs and the instruction which they received over the corresponding five year period.

The nine questions developed during the pilot study were

used as a guideline for the interview schedule. A summary of the students' responses will be given for each of the questions.

Question #1: Do you consider yourself a "good" speller or a "poor" speller?

Most of the students (14 out of 20) stated that they thought they were "average" or "in between". Three said that they were "good" and one described himself/herself as "above average". The four students who described themselves as good and above average were indeed students whose scores fall in the top quartile of their group. None described themselves as "poor" and even those whose scores placed them in the low quartile of their group replied that they thought of themselves as being "average" or "in between" or "okay".

When questions as to what they based their opinion about themselves in spelling, most answered, "I do pretty good on spelling tests" or "I don't have many spelling mistakes when I hand in reports or essays."

Question #2: What do you remember about how you were taught spelling?

Most of the students responded with "by sounding them out"; others added "breaking them into syllables" or "just memorizing them." A few students immediately recited a specific rule such as "i before e" etc. Three students said they learned to spell because of the many tests they had and one said a spelling "kit" taught him to spell. Several replied that they could not really remember any ways but that they had their own ways of remembering such as "secretary"

starts with the word "secret" or "if there's a silent vowel you sound it to yourself but not out loud." Others mentioned just "learning lists of words" or "writing the words over and over."

Question #3: How do you go about learning to spell a new word?

The most common reply to this question was, "I just look at it and try to memorize it." Some added, "I sound it out" or "look for parts or patterns that are the same" or "think of others that are the same" or "try to remember the exceptions." Several replied they "think of the meaning" and some said "I write it out."

Question #4: Do you remember how you first started to learn spelling? Tell me about it.

At first many of the students replied with "I can't remember" but when given some time to think, they were able to reflect on several ways they had of learning to spell. Again several mentioned "rules", "sounding it out", "blending letters together" or "we started with easy words like 'cat' and 'dog'." One said, "I used to read a lot so I knew a lot of words" and another replied, "my sister three years older taught me to spell." Several added, "by writing them out" and "memorizing them."

Question #5: What do you do when you are writing and you don't know how to spell a word?

The answer most commonly given was "look it up in the dictionary" and secondly, "ask the teacher" or "ask my

parents." Many, however, replied with "I try it first" or "I try sounding it out first and if it doesn't look right I look it up." One student said, "I write it syllable by syllable" and another replied, "I write it in different ways that I think it might be."

Question #6: What do you think about spelling? Is it important or not? Have you always felt that way or has your opinion changed over the years?

Most of the students felt that spelling is important, especially for "your education." A few thought it isn't so important because "in some jobs you don't need it." Some felt they had always thought about spelling as they do now but more of the replies indicated that their opinion had changed as they got older. "I used to think 'what do we have to know this for?', but now I know it's important." One student indicated that "you can be smart and not know how to spell - like Galileo."

Question #7: Do you have spelling as a subject now? How often? What do you do in that time?

The answers to this question varied with the different grade levels. The Grade 5 group indicated that they have spelling as a subject "almost every day." In Grade 6 it was "three times a week" as part of the language period. In Grade 7 it was "about once a week in a language period" and by Grades 8 and 9 the students replied "no, we only have tests once in a while in spelling but no lessons or text books."

As to what is done in the spelling period for those students who have it as a subject, the Grades 5 and 6 usually have a standard type of textbook which contains a weekly word list, questions pertaining to word study skills and a test at the end of the week of the words on the list. Those that have spelling as part of language three times a week usually have a pretest of the list words, then do questions or exercises pertaining to that lesson and are finally tested again at the end of the week.

The students in Grades 8 and 9 usually get word lists in language arts but the emphasis is on vocabulary or meaning, rather than correct spelling, but several of the students stated quite definitely, "we still have to spell them right too." Aside from these vocabulary lists, they are given larger spelling tests ("up to 100 words or so") about three times a year.

Question #8: Has teaching helped or made a difference.? How?

Of the 20 students interviewed, 18 indicated a firm "yes" that teaching has helped or made a difference. They added that "it helped me figure out new words", teachers told me the basic rules for spelling", "if it's on the board you remembered it better", "the teacher helped us with the meanings" or "she'd make us look up the words." Most of these students indicated that they "could not have done it on my own."

Two students stated that they learned to spell on their own and teaching really didn't help them at all.

Question #9: What would you change about the teaching of spelling or about spelling programs?

About half of the students felt they would not change anything, that "it's okay the way it is" or "I don't know what I would like to see changed." These were students who were "average" to "poor" spellers.

The other half had numerous suggestions. Several made the comment that the texts, or lists were too easy, "they should be more challenging", "we had those words already in Grade 3", "it's really boring to write words over and over that you already know", "the exercises in the lessons are useless." Most of these comments were made by the "good" spellers.

Some felt there should be more teaching, especially in the upper grades. "I don't have trouble but for lots of kids it's not enough." "There could be more fun things like contests or bees", "there should be more time to learn the words - not just look at them and here's the test." "Spelling is boring because they give us words like 'cat' and 'dog'. They should find out first what we know and teach us what we don't know."

In conclusion, it was found by interviewing this group of students that their perceptions about spelling programs and instruction vary from grade to grade as well as according to the students' achievement level in spelling. The "good" spellers had stronger feelings that the spelling programs were too repetitive and unchallenging. It was also evident

that the emphasis for spelling as a subject, diminished at the upper grades. In viewing themselves as spellers, almost all of the students placed themselves in the "average" range. Most agreed that instruction had helped but many admitted that they had their own strategies for learning words. Often the "poor" spellers cited more rote-type strategies such as repeated writing of words. Early recollections of how spelling was taught usually recalled "rules" about sounding or syllabication. Almost everyone felt that spelling is important.

A more specific itemized list of the responses from the different students in each group is found in Appendix C.

This concludes the findings of this study. In summary, they indicate that spelling achievement scores increase for all groups from one grade to another. Secondly, there is very little difference in the achievement scores of boys and girls at the elementary level but that this difference increases in the junior highschool grades in favor of the girls. There are almost the same number of boys and girls who are "good" spellers but there are almost twice as many boys who are "poor" spellers, as there are girls who are "poor" spellers. Thirdly, the difference between the "good" spellers and the "poor" spellers increases with each grade level. Lastly, the information gleaned from the structured interviews gave an indication of the students' perception of spelling programs and instruction at the various grade levels.

Chapter V

FINDINGS, CONCLUSIONS AND IMPLICATIONS

This study examined the spelling achievement of students over a five year period. It has also recorded the reflections of students and their perceptions about spelling programs and instruction which they received during that five year period in the elementary and junior high school. Comparisons were made between the spelling achievement scores of boys and girls and the achievement scores of "good" spellers and "poor" spellers. The conclusions are based on an analysis of the data which was presented in Chapter IV. This chapter summarizes the findings, the conclusions based on these findings, the limitations of the findings and the implications for the teaching of spelling and recommendations for further research.

I Findings and Conclusions

Spelling Growth Over Five Years

Question #1

How do scores for the same students on the Morrison-McCall Spelling Scale vary over a period of five years which extends through the elementary grades and into the junior high school setting?

All groups made gains or improved from one school year to another in that each group achieved a higher grade score than the previous year.

There was some variation in the mean grade score from one group to another at each particular grade level.

Question #2

Are there discernible stages over the five year period at which there is more, or less, growth in spelling achievement?

Findings

The largest gain for all groups occurred at the Grade 3 level. Due to the variation in the makeup of each group, the amount of gain varied with each group at the various grade levels. Only one group gained five grade levels in the five year period. In the elementary grades the mean grade score was almost one year above grade level. This diminished considerably in the junior high school level.

The greatest gain in one year (1.3 and 1.4) occurred at the Grades 2 and 3 levels which may be the point at which there is the greatest emphasis on spelling skills. At no other grade level was there a gain of one year in Grades 4-9. In each of these grades the mean gain is .7 or about half of what occurred in Grades 2 and 3. It is possible that this is due to the different type of spelling instruction which takes place in the upper grades.

The lack of a five year gain in the five years would seem to indicate that the Morrison-McCall Spelling Scale may fail to test the full range of spelling potential, especially of the better spellers. It could also be that current spelling programs

may limit the acquisition of an extended spelling vocabulary.

Students in the elementary grades have a mean grade score of almost one year above grade level, whereas in the junior high school grades this diminishes, in that the mean grade score is six months below grade level for the group in Grade 9. This could again be due in part to the scaling effect of the Morrison-McCall Spelling Scale or due to the nature of current spelling programs.

Comparison of Boys and Girls

Question #3

Are there discernible differences in progress between male and female spellers over the five year period?

There is almost no difference in the mean grade score of the boys as compared to the girls in the elementary grades. In the junior high school grades there is an increased difference in the mean grade scores of boys and girls in favor of the girls.

The amount of gain for boys and girls is almost identical throughout the grades. Although the mean grade scores of boys and girls are almost identical in the elementary grades, there is an increased difference in favor of the girls in the junior high school grades. Since both groups are exposed to the same teaching methods and spelling programs, perhaps it is the more intensive stress on specific spelling skills in the elementary grades which keeps the achievement scores of boys and girls closer together. In the junior high school where the structured lessons in spelling diminish, there is a divergence of the

scores. One explanation might be that perhaps girls make greater use of spelling skills in the language arts areas whereas boys tend to lean more towards mathematics and science activities in the upper elementary and junior high school grades. There are more boys who are poor spellers than girls who are poor spellers.

Comparison of "Good" Spellers and "Poor" Spellers

Question #4

Are there discernible differences in progress between "good" and "poor" spellers over the five year period?

There are almost an equal number of boys and girls in the first quartile whereas there are twice as many boys in the last quartile.

Although spellers in the first quartile and spellers in the fourth quartile show a gain in the mean grade score at each particular grade level, the difference in the mean grade score becomes greater with each grade.

There is a decrease in gain for students in the first quartile in the junior high school grades.

Both spellers in the first quartile and spellers in the fourth quartile made the most gain at the Grade 3 level.

Spellers in the top quartile are above grade level, even in the junior high school grades whereas spellers in the fourth quartile drop even further below grade level.

Structured Interviews

Question #5

How do students perceive the spelling programs and instruction which they have received over the five year period?

Most students considered themselves to be "average" spellers. This seemed to indicate a kind of modesty in the top students and perhaps an unrealistic view of themselves for the poor spellers.

Many could not remember how they first learned to spell but often recited rules or jingles which they remembered being taught.

Almost all students realized the importance of spelling in written work but admitted that it was in the last few years that they came to this realization.

The amount of instruction and structured spelling lessons diminished directly with each grade level, yet almost all students felt strongly that teaching had made a difference in becoming better spellers.

Many students commented on the tediousness of writing words "over and over" and several felt that spelling was boring because the same words occurred grade after grade. These are but a few of the highlights of the comments made by the students during the structured interviews. A more detailed account in found in Appendix C.

II Limitations of the Study

This study should be considered in view of the following limitations:

1. The Morrison-McCall Spelling Scale was the sole instrument used to measure the spelling achievement of students in this study. This probably did not measure the full extent of spelling ability of the students. Also, since this instrument is an older test, some of the words may be utilized less frequently by today's students, again causing the scores to be somewhat depressed, particularly in the upper grades.
2. The norms upon which the grade scores are based may be outdated since they were established many years ago and there is no established evidence of their present day validity.
3. The sample for this study is the non-transient group of students enroled in one particular elementary school.
4. In comparing the boys' and girls' achievement scores, no attempt was made to match the intelligence quotient of students within the groups.
5. The size of the sample (20 students) upon which the interview data is based may be a limitation.

III Implications

In view of the findings of this study, the following

implications may be indicated:

1. Provisions should be made within each classroom for differentiated instruction and programs to groups within classrooms or grades who are "good" spellers, "average" spellers, and those who need special help.
2. Provisions should be made for more challenging spelling programs for "good" spellers to use their skills rather than continually reviewing words which they already know how to spell.
3. Teachers should recognize the individuality of each student's strengths and weaknesses and that consideration in planning lessons and remedial work is given to help each student achieve to the level of his ability.
4. Up-to-date instruments for testing the spelling achievement of students at various grade levels might be developed and more recent norms established locally.
5. Structured and planned instruction in spelling should continue into the junior highschool and highschool grades.
6. The range of scores at the different grade levels would seem to indicate differentiated spelling programs to accommodate the "top", "average" and "low" spellers at each grade level.

Many unanswered questions remain as to the most appropriate method for teaching spelling in order to

accommodate differences in teaching styles of personalities of teachers, individual differences in students, as well as the varied needs of groups of students at different grade levels. When these three factors have been carefully considered, a selection of a method most suitable to the particular situation will probably come closest to achieving the desired results.

IV Recommendations for Further Research

Upon the completion of this study, the following recommendations for further research in the field of spelling may be made:

1. In view of the described methods of teaching spelling and the variations of each, what methods are currently being used in the classroom?
2. Is a particular method more widely used at certain grade levels than other methods?
3. Does the choice of method reflect the provincial guidelines of the curriculum or is it based on recommendations based on the more local philosophies of language arts consultants, and administrators found within school systems or individual schools?
4. Are there schools or school systems where one or certain methods of teaching spelling are practiced consistently? How does achievement in spelling compare with schools or systems which do not use these methods?

5. What are the defining characteristics of the various methods and what philosophies about the teaching of spelling do these characteristics represent?
6. What is the achievement level in spelling of students graduating from high school and what percentage of graduates receive diplomas, yet are deficient in this skill?
7. What happens to the achievement levels in spelling as a student progresses through school if the student is:
   (a) low in the primary grades,
   (b) average in the primary grades,
   (c) superior in the primary grades.
   In other words, does instruction make a difference?
8. Are the existing instruments used to assess spelling achievement outdated and should new techniques for measurement be developed?
9. Since there are differences in visual and auditory abilities among top spellers and poor spellers, can it be determined which kinds of methods will do more to foster improvement for the poor spellers?

Since learning itself is a highly individualistic process, it is a difficult task for the classroom teacher with 20 to 30 students to accommodate the individual needs and differences of every student. Sometimes at best, various groupings of students with similar needs can achieve some good results. At times a closer diagnosis of spelling errors in a student's work can

point to a plan for remediation. It seems evident however, that in every classroom there are students who seem to be able to spell correctly without any great effort on their own or the teacher's part and those students who find spelling extremely difficult and as a result, require a great deal of instructional ingenuity from the teacher, but a much greater effort from themselves.

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APPENDICES

APPENDIX A

Pages 116 to 127 have been removed due to lack of availability of copyright permission.

These pages contain a description of the Morrison-McCall Spelling Scale, directions for administrating the test, the scoring procedure, as well as the directions for interpreting the scores. The actual word lists of tests 1-8 are also found in this section.

A copy of this material may be found in:

Linneman, Wally. The Spelling Achievement and Reflections of Students Over a Five Year Period in the Elementary and Junior High School, Unpublished thesis, University of Alberta, Edmonton, Alberta: Spring, 1983.

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APPENDIX B

Appendix B

Interview Schedule

The following questions as developed from a pilot study, were used for interviews conducted with 20 students:

1. Do you consider yourself a "good" speller or a "poor" speller?
2. What do you remember about how you were taught spelling?
3. How do you go about learning to spell a new word?
4. Do you remember how you first started to learn spelling? Tell me about it.
5. What do you do when you are writing and you don't know how to spell a word?
6. What do you think about spelling? Is it important or not? Have you always felt that way or has your opinion changed over the years?
7. Do you have spelling as a subject now? How often? What do you do in that time?
8. Has teaching helped or made a difference? How?
9. What would you change about the teaching of spelling or about spelling programs?

APPENDIX C

Appendix C

Student Responses from Interviews

Question #1: Do you consider yourself a "good" speller or a "poor" speller?

- average, on tests that we have, tests I do fairly well, most of my reports I don't have spelling mistakes.
- good, on language tests I usually do good.
- average, my marks are pretty good.
- above average, my tests and reports are okay.
- average, I do pretty good on tests.
- good, I do good on spelling tests and I have few mistakes on assignments.
- in between, my mark is average - I don't do too bad.
- good, most of the times I do well.
- average, I don't get hard words wrong and I get the easy ones right.
- average, there's a kid who's better than me.
- average, I only get a few wrong on tests/the odd time I get some wrong.
- okay I guess, in spelling I get them right.
- not great.
- in between.
- in between, my marks are okay.
- above average, I get good marks.
- pretty good, my tests are okay.

- average.
- pretty good, my marks are okay.
- in between, on tests I pass but not great on assignments.
- in between, I pass them - marks are in the middle.
- average, tests - spelling is okay.

Question #2: What do you remember about how you were taught spelling?

- spell 'em out, put into syllables, lots of tests, that sounding out makes it a lot easier or breaking into syllables.
- can't remember any ways.
- sound out words, write them down.
- sound it out.
- I can't remember.
- I can't think back that far.
- I remember Grade 5 'cause you taught it.
- list given to memorize it.
- you had a kit, you did a test, you had to learn the words mostly by sound.
- like the vowels and how you pronounce them.
- I just memorized them.
- I don't know.
- by sounding out, I have my own way, if there's a vowel you don't sound.
- consonant - silent "e".
- like secretary is like the beginning of secret.
- I was kind of slow, I couldn't catch on.
- I can't remember.
- I'd break it into syllables.
- Teachers help you - if you get it wrong.
- Started with long letter words.
- Rules and all the exceptions.

- rules/i before e/how to spell some words.
- tests - sentences - writing over and over again.

Question #3: How do you go about learning to spell a new word?

- usually I look it up in the dictionary, look at meaning, look at how to spell it/different pronunciations.
- I either sound it out again or think of the meaning.
- I remember how to spell it.
- I either sound it out, or think of the meaning.
- same as I used to - sound out - just guess (irregular ones).
- I don't know, I can't remember.
- I look it over, try to memorize.
- I guess there's certain rules.
- look in the dictionary.
- break it into syllables/write it two or three times, look at it.
- look for other words in it/patterns I've seen in other words or syllables.
- writing it out.
- the way it sounds - exceptions - try to remember them.
- I say 'em out loud.
- I just <u>try it</u> - if I don't know it I look it up.
- sound them out.
- I spell it, look at it, check it, write it again.
- sometimes I just try it.
- I'll just sit there and look at it - say it.
- I try to memorize it - say it, study for a test.

- sound it out/if they don't look right I think of others that sound the same.
- if I get it wrong on a test I look it up.
- I just study the way the letters go/I look at them.
- concentrate on the word.

Question #4: Do you remember how you first started to learn spelling? Tell me about it.

- give us a word, spell it out a few times, ask certain people in class to spell it out.
- I used to read a lot of books.
- I know a lot of words.
- try to sound it out at first/I was frustrated.
- they gave you the rules.
- we had texts with big print.
- write it out - spellers, write sentences.
- went by how they look.
- looking at it and remembering it.
- rules - like the silent "e", pronounce the vowels.
- I learned to spell 2-letter words, then 3-letter words, I think.
- started out easy - one letter at a time - sounding it.
- tried to memorize the hard ones.
- can't think back that far.
- easy words like cat and dog.
- cue cards - over and over again, say it/spell it/both.
- I just learned the basic sounds and blended them.
- think about it.
- don't remember.
- there was a T.V. thing - putting letters together.
- my sister three years older taught me.
- write them out a couple of times.
- using colors - I think I learned those first.

Question #5: What do you do when you are writing and you don't know how to spell a word?

- look it up in a dictionary/try to think of the meaning/ try to find another word.
- I think about it/look it up in dictionary/sound it out/ think about the sound.
- look in a dictionary.
- I ask the teacher.
- ask the teacher, look it up in a dictionary.
- in a dictionary/sometimes I ask teacher.
- I write it out in different ways that I think it might be spelled - if it doesn't look right, I look it up in the dictionary.
- try to sound it out.
- look in the dictionary/sound it out.
- look it up in the dictionary/ask teacher.
- look in the dictionary.
- I try it first then I look it up.
- first I sound it and try writing it then I use a dictionary.
- I use a dictionary/sometimes I try to think how it looks.
- I take it syllable by syllable, then look it up.
- I ask a teacher/look in the dictionary.
- sound it out/look in dictionary.
- on a rough copy I try it, on a good copy I look it up or ask someone.

- look in a dictionary/I guess at it.

- I ask my dad/look in a dictionary.

Question #6: What do you think about spelling? Is it important or not? Have you always felt that way? Or has it changed over the years?

- it's important at school/I've always felt that way.
- it is important. If you're a bad speller the boss won't give you a job.
- it's yes, important.
- it's changed - I used to think "why do I have to know this stuff?"
- because you can't really get that far without learning how to spell words. Doing a report you need to spell some pretty big words.
- once you get older teachers expect you to be able to spell words - not get any mistakes - important.
- yes, I liked it a lot.
- depends on where you are - certain jobs it's not drastically important.
- it's good to have.
- for school it's important, students should know how to.
- didn't think about it. In the younger grades I wondered "Why do we have to know this" so I guess it has changed.
- it bores me to sit there and write out the same word.
- I'd say it's fairly important.
- I haven't really thought about it that much. Sort of always have felt that way.
- not really that important.

- no, won't need it - welder.
- I think it's very important - if you write an essay and you get it all wrong people won't know what you mean. They'll get a totally different view of it.
- I've always thought so.
- yes, I've always thought it was.
- on your education you need to know how to spell. Maybe in baseball you don't have to know. I used to think it was the only subject. Math and Science are more important.
- it's not important - Galileo - very smart but didn't know how to sepll.
- construction, world spelling bee.
- if you're a grownup you need to know how to spell to get a job.
- it's important/Changed/In Grade 3 I didn't care. Have to spell for different jobs.
- yes, if you're trying to survive, the guy asks you to fill out a form/Changed - I thought it wasn't really important.
- yes, always thought so.
- it is but/I used to be good, now I'm not. I missed spelling periods (challenge).
- in my reports all the comments are it would be better if spelled.
- changed my mind - why do I have to learn this.
- yes important - need it to get good marks.

- not important earlier.
- yes important.
- changed because my little brother has problems.
- yes, it's important - always.
- if you're a secretary you have to know how to spell.
- a truck driver doesn't need to spell.
- spelling doesn't interest me.
- yes - if you write a letter you have to spell right.
- did not think it was important, be a teacher.
- yes - if you do a report.
- yes - you need it for a job.
- yes - I've changed my mind - at first it didn't seem important, then in Grade 3 it started hitting me.
- yes - it's important - if you're going to write a cheque it's embarassing.

Question #7: Do you have spelling as a subject now? How often? What do you do in that time?

- usually have list of words a week, write out questions, list of words.
- language (one 40 minute period/week), use a text/ questions we get wrong we write out three times.
- no - we have language - we do a word list - have test.
- about once every two weeks.
- we did exercises out of a workbook.
- yes - worksheets/every day.
- every day - test, exercises, questions.
- no/in language - list of words/look up meanings/when we finish a novel we get a quiz, we look up words, different meanings, no text - should give kids more credit.
- no/we have vocabulary tests/more for meaning/no text.
- no/no text/no period.
- no/spelling tests a few times a year (three times a year).
- yes - sentences, sheets/Monday, Wednesday, Friday.
- yes - five days a week (work sheets). We just write our lessons - I like the tests in language - exercises some - for some it's easy but some need more time.
- Monday test, work on questions/test on Friday/yes we had a text.
- yes, three times a week - with text.
- yes - two times a week - we do the units.

- yes - three times a week.
- in language/not now/ once a week/ words are too easy/ text is useless.
- language - three times a week, we have a list.
- three times a week.

Question #8: Has teaching helped or made a difference? How?

- yes - helped figure out words I don't know/or they'd make me look it up, or give me the meaning.
- I just used to just do it by myself. You get to learn more words.
- teaching helped - on my own I couldn't have done as well.
- it helped - but I don't know how it has helped.
- couldn't do it on my own.
- I understand the words better.
- yes, but I don't know how.
- for some words nothing helped, teaches you how you can sound out.
- I think I could have done it on my own.
- it helped/that kit did it.
- if you see it on the board you remember it better than if you just look it up in the dictionary.
- yes - I don't know how.
- I learned to spell on my own. But some words I learned 1/4 helped - 3/4 I did on my own.
- Yes - if I hadn't been taught, I wouldn't know a lot.
- I couldn't have learned it on my own.
- teachers help you learn - they teach you the basic format and rules.
- made a difference.
- yes - a lot easier to spell words.
- yes.

- no, couldn't have done it.
- has helped/in language she says words and you have to spell.
- yes.

Question #9: What would you change about the teaching of spelling or about spelling programs?

- more spelling/bees, contests, a lot of the kids find it easy, more periods because for some it's not enough.
- we used to have a lot of tests, they were good. We should have more of those - the units don't really help much.
- probably take more time to learn - all <u>we</u> do is sort of look them over and then we have a test.
- write out words - we did that in Grade 3. Writing out words, you know, is boring.
- it's boring.
- give the kids boring words like "cat", "dog". Find out <u>how</u> much kids know first, teach them what they <u>need</u> to know, should give kids more credit.
- I don't know/I don't see what else you could do.
- not make any changes.
- not really - I don't know.
- not change anything.
- I hate writing sentences.
- they're easy for me - could be more challenging. I can remember doing that stuff in Grade 3.
- not really except that it's boring.
- I'd change the text/too many easy words.
- no change - periods change them.
- for my brother all those signs on top of letters

confused him.

- nothing should be changed.
- should be continued.
- change the way teachers just tell you to study it.
- the exercises are useless.